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OF ALEXANDER INGLIS

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THE JUNIOR HIGH SCHOOL

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EDITOR'S INTRODUCTION

EVERY new movement in education, if it is to succeed at all, must pass through two critical stages of development before it can find its proper place. The first stage is that in which the new movement struggles for recognition by educators and by the public. The second stage is that in which approval has been won, but actual practice is incomplete, and the character or status of the new movement is still to be established. The success or failure of the movement may be determined at either of these stages.

There is abundant evidence that the junior-high-school movement has passed successfully the first stage of its development. Though little more than a decade has passed since its real beginning, it has met with general approval throughout the country. The question now is not so much whether the junior high school shall be recognized as a part of our public-school system, but what sort of a junior high school shall be established and what sort of an education shall be provided therein. Hundreds of junior high schools established in almost all parts of the country testify to the fact that the new institution has met with general approval. They also testify, however, to the fact that those responsible for the organization of junior high schools differ widely in their conceptions as to what such schools should be.

The present is a time when the junior-high-school movement is in a very critical stage of its development. It is a time when the form of reorganization is found in hundreds

of school systems, but the real reorganization attempted in but few. It is a time when there is danger of numerous junior high schools in name, but few in fact. It is a time when there is great need for clear orientation and for the recognition of educational standards which should obtain in the new type of school. It is of great importance that at this stage of its development a survey be made of the present status of the junior high school, defects and merits pointed out, and a constructive program suggested for its development.

For this task no one is better qualified than Dr. Briggs, who has been among the leaders in the development of the junior high school from the beginning, but whose attitude toward the movement has always been that of the scientific student of education rather than that of the propagandist. In this volume he has presented the results of a careful and critical analysis of junior high schools throughout the country, not on the basis of *a priori* theory, but on the basis of first-hand investigation. No one realizes better than he that the junior high school is at present an institution whose final character and status are still to be determined. It is in order that assistance may be given in the determination of the character and status of the junior high school that this volume has been written.

ALEXANDER INGLIS

PREFACE

THE long discussion of proposals for the reorganization of our secondary schools has now passed into concrete action. The arguments based on new educational theory, on changed and changing conditions in the United States, and on the increase in the number of pupils who continue in school beyond the elementary grades, have during the past decade been so fully accepted that the most remarkable change in the history of our education is now well under way. The purpose of this book is to present the facts, so far as they can be ascertained, concerning the newly established junior high schools, or intermediate schools, and at the same time to set forth a constructive program for the reorganization if it is to be educationally effective.

The author has had the privilege of visiting personally more than sixty junior high schools, from Massachusetts to California and from Minnesota to Texas. The information thus obtained has been supplemented by a study of all available literature on the subject of reorganization, by questionnaire returns from many schools, and by conferences and correspondence with administrators, several hundred of whom have been students in his classes. In addition, during the past five years he has had the practical experience afforded him as educational adviser of the Speyer Experimental Junior High School, which is conducted jointly by the City of New York and Teachers College.

PREFACE

Acknowledgment is due and is gratefully made to the many people who have aided in this study, especially to those principals and superintendents who have courteously shown their schools, cheerfully submitted to cross-examination, patiently filled out a lengthy questionnaire, and generously answered letters of inquiry. It will not seem invidious to thank especially Principal Joseph K. Van Denburg and the teachers of the Speyer School for their cordial and constant coöperation and helpfulness.

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THE JUNIOR HIGH SCHOOL

CHAPTER I

THE NEED OF REORGANIZATION OF SCHOOLS

A. CRITICISMS OF PUBLIC SCHOOLS AS ORGANIZED

UNLIKE any other country, the United States has for all children a single system of public schools, free and generally accessible. In the larger part of the country elementary education continues for eight years, though in the South it has only seven grades and in parts of New England it still has nine. On these several bases there have been superposed four-year secondary schools remarkably alike in organization and curriculum, whatever the previous preparation or the future needs of the pupils. There are many high schools with shorter courses, but as a rule they offer one, two, or three years of the regular program of studies; and during the past decade or two a few communities have extended their offerings so as to include two years of college work.

The causes of the "eight-four" organization, toward which the country has been tending, are not clear, the histories of education being for the most part silent on the topic. Astounding though it may be, the usual distribution of time to elementary and to secondary education is not the result of careful definition of the functions of the two types of schools based on the needs in a new democracy. Whatever may have been the influences on administrators

here and there, the assignment of time to elementary and to secondary education is the result of a fortuitous compromise between two unfortunately contending organizations which were inherited from Europe. Moreover, one searches in vain the current literature for any generally accepted and useful definition of elementary and secondary education in America to-day or for a similarly approved statement of their purposes.

The similarity of practice in elementary schools the country over would argue that there is at least a tacit agreement as to purposes and functions, but research shows that usually such changes as have been made are for some reason instituted in certain schools and then widely copied without being attributed to definitely stated and generally approved fundamental principles. The betterment of practice has, however, been proceeding steadily, and as the purposes of common education are relatively simple, still further progress may be confidently expected from individual experimentation and subsequent imitation by those who approve of the results.

In secondary education the problem is much more complex; and despite the general similarity of traditional offerings, there are in many sporadic instances wide divergences from the common practice — divergences due, however, more to the sympathies and vision of individual schoolmen than to convincing principles clearly presented. It is safe to say that such basic principles as have been proposed are not yet assimilated by those chiefly responsible for directing secondary schools. A beautiful, even if somewhat blind, belief in "education" has resulted during the past

quarter-century in a tremendous increase in the number of public high schools from Maine to California; but with the changes that have come in our social and industrial life and with the unparalleled increase in the number and kinds of children continuing and able to continue beyond the elementary grades, the high schools face the necessity of even more highly differentiated curricula than they now offer. This recognized need, with its necessary increase in the annual budget, demands as never before an educational program that will direct the expansion toward the desired goal.

In addition to the indefiniteness of function and of purpose, the public high school has developed apart from the elementary grades and often in ignorance of their practices and achievements. Although demanding the completion of the grades as a condition of entrance, the high school has infrequently built its program on that of the elementary school.

Due largely to these conditions, with the increased popular interest in schools and with the earnest, systematic study of education, there has come a flood of criticisms of our organization. A part of these criticisms has come from the public as it has been unable to keep in the high schools its children, who have neither succeeded nor been satisfied with the traditional offerings, and as it has felt disappointment with the product of the four-year curriculum. A more constructive part has come from the steadily increasing number of professional men and women who, alarmed no less by the inelastic curriculum than by the elimination from school, have sought to find causes and remedies. In order that they may be conveniently examined and con-

sidered, the arguments against our eight-four school organization have been collated and are presented in the remainder of this chapter. It is impossible to give here the complete argument for and against the validity of each criticism, but a running commentary will indicate at least some of the evidence and assumptions that must be considered before a conclusion can be reached.

Criticism I. The eight-four organization is not justified by (a) psychology, (b) comparative education, (c) historical development, or (d) results.

The first of these detailed criticisms is partly based on the assumption that adolescence is saltatory, that all children reach it at approximately the same time, and that it brings generally characteristics that necessitate peculiar treatment, preferably with the group of adolescents segregated. The monumental work of G. Stanley Hall, more frequently cited than carefully read, is most responsible for these assumptions. It has been convincingly shown by Inglis,¹ however, that adolescence comes gradually, and by Crampston and others that it may begin as early as the ninth year or as late as the sixteenth. This evidence does not invalidate the charge; but it helps to focus the attention on the peculiar characteristics of boys and girls generally of from twelve to sixteen and to ask what differences in school practice, if any, should be introduced because of them. The excellent summary by Whipple² presents the facts in the case. There is by practically every experienced teacher some adaptation of work to the characteristics of pupils;

¹ *Principles of Secondary Education*, chaps. I, II.

² Chapter VII of Monroe's *Principles of Secondary Education*.

but so far as is known, there has been no systematic attempt, in junior high school or in the older organizations, to adapt subject-matter, method, and discipline consistently to meet any large number of the peculiarities enumerated. Some such attempt, however, should be made. The assumption that pupils in early adolescence should be segregated both from the younger and from the older children is accepted by many, their arguments being that the early adolescents need an education, especially in social control, essentially different from that successful with others, and that while unwisely imitating the older pupils, they are a bad influence on the younger ones. It is in varying degrees denied by other schoolmen. As will be shown later, however,¹ the testimony of junior-high-school principals and teachers is that discipline is generally easier when the intermediate grades are segregated.

The criticism concerning comparative education must be accepted. The United States is the only country in the world that has the eight-four organization. It does not follow, however, that it is bad for our Republic with its peculiar democratic ideals and economic conditions. Whether or not one condemns the common American organization because of the different plans of other civilized countries will depend largely on his acceptance of one or the other of the fundamental programs presented in a later chapter.² Inasmuch as nations are alike in more respects than they are different, it is probable, however, that there is much that we can profitably learn from European educational systems.

The third detail in this criticism, that the eight-four

¹ Page 246-48.

² Chapter II.

organization is not justified by historical development, is, because of our ignorance of the potency of several influences on the development of our school system, difficult to consider. It has been argued that our eight-year elementary school has developed from Prussian influence, which provides for the children of the lowly a restricted education terminating about the time of confirmation by the several religious sects, and that on this foreign type of school we have superimposed a secondary school for those who may elect it. This argument is flatly contradicted, however, by the most fully informed of our historians of education. It seems more likely that the eight-four organization is partly an historical accident, a sort of compromise between the early contending elementary and secondary schools. The former, as is well known, existed with any number of "grades" up to twelve, and the latter, as in Europe, often ran down in preparatory work as low as primary classes. Gradually, as the two types were combined, there resulted what we now have. Certainly there is no evidence that at any time before the present there has been any widespread effort to consider the needs of children and the demands of the nation in such a way as logically or scientifically to determine the length of either the elementary or the secondary school course. Hence the problem on this count is not prejudged by existing conditions. The junior high school must develop or be discarded for other reasons than those historical.

The last of the four details in this criticism, that the eight-four organization is not justified by results, is not sufficiently specific to be adjudged. All that its proponents mean is probably included in the following charges. Although such

an indefinite detail often finds sympathetic reception in the general dissatisfaction of the human mind with anything less than the ideal, it does not afford material assistance to those who would analyze the problem and attempt to solve it.

Criticism II. Isolated and small grammar schools are uneconomical in that

- (a) the plant, if equipped with special rooms (shops, laboratories, auditorium, gymnasium, and library), is not fully used;
- (b) special teachers and supervisors in going from building to building lose much time;
- (c) upper classes are frequently not filled;
- (d) they do not permit of differentiated curricula, departmental teaching, and promotion by subject.

All of these details are soundly based. Only in the larger elementary schools is it possible to erect and equip a building with the special rooms generally admitted as desirable in the education of pupils in the upper grades; and even in an eight-year school of twelve hundred registration, there will be approximately only eighty-one pupils in the seventh grade and seventy-seven in the eighth, obviously too few to use the shops, laboratories, and other special rooms continuously.

Special teachers and supervisors of industrial work — music, drawing, physical training, and the like — can frequently do all the work assigned for an individual building in part of a session. The time required for travel to another building in a different, and sometimes a remote, part of the city is a dead loss. Such a condition in Cleveland was one of the cogent reasons for the establishment of junior high

schools there. When a sufficient number of similarly graded pupils are congregated in one building, these special teachers can be occupied there for the entire time, or at least for one or more entire days a week.

When for purposes of economy or of educational advantage it is decided to have classes of approximately a certain size — say thirty-eight — a superintendent is disturbed by the problem of groups of twelve or of fifty in an upper grade. If he cannot conveniently transfer some of these pupils to another school, he faces the alternative of an increased per capita cost or of an educationally undesirable number in one class. In Waterloo, Iowa, for example, the seventh- and eighth-grade pupils in 1917-18 were distributed among six buildings as follows:

<i>Building</i>	<i>VII</i>	<i>VIII</i>
A	73	95
B	26	
C	49	69
D	11	
E	18	
F	56	42

A study of this distribution will show how awkward the situation is; of course material differentiation in any one school is out of the question. Were these pupils congregated into one building, there would be 233 in the seventh grade and 206 in the eighth — numbers that may be divided fairly evenly into five or six classes of normal size. Each of these five or six classes, in turn, could be directed toward such work as meets the needs or abilities of its children. By sending all of these pupils to a central junior high school, the superintendent would have a total number which,

whether differentiated courses were offered or not, could be divided by the normal class size with a minimum of variation. It follows as a matter of course that only in schools of considerable size can differentiated curricula be offered. The best that can be done in small schools is the offering of an exploratory curriculum worth while for all pupils to the extent that it is pursued, or else a specialized curriculum suited to the majority of pupils and directed by local needs.

Similarly it follows that departmental teaching and promotion by subject are practicable only in schools of considerable size. These facts being true, the validity of this second criticism depends, of course, on the desirability of differentiation, departmental teaching, and promotion by subject — topics that will be discussed somewhat fully later.

Criticism III. The costly building and equipment of the high school are unnecessary for the adequate training of ninth-grade pupils.

This depends on the course necessary for the satisfactory education of the ninth-grade pupil and on the relative equipment and cost of the junior- and the senior- high-school buildings. In Philadelphia, according to Assistant Superintendent Wheeler,¹ the newest high-school buildings cost in 1917 \$520 per pupil, the newest elementary-school buildings, containing all equipment used in the present ninth-grade work, \$320. There are abundant other data supporting this point.

Criticism IV. The work of the elementary school does not prepare for life activities.

¹ *Old Penn Weekly*, 13, 1007.

(a) There is an indefensible justification of subject-matter by ideas of general transfer and of discipline.

The discussion of general transfer of training is apparently not ended, but from it has come a general disbelief in the old faith that power developed in one field automatically and inevitably is exercised in all other fields, a faith that underlay almost the entire procedure of the schools before this century. In spite of the admirable work done by many school systems, by writers of textbooks, and especially by the Committee on Minimum Essentials of the National Society for the Study of Education,¹ there are in our courses of study many relics of the discredited psychology. The faith that "discipline" of the mind or of the spirit is secured by work that is distasteful also finds few defenders to-day. Pragmatic belief in it is disproved by the fact that scarcely any one seeks for himself mental and spiritual growth by continuing in adult life tasks that are justified only by their repugnance. And yet many elements of courses apparently introduced for this purpose also still persist. To this extent, then, the criticism may be accepted. It is another matter whether or not a new school organization will entirely or even to a greater degree discard these foundations of practice. It is generally admitted, however, that the older organization is not making as rapidly as is desirable curriculum changes consonant with principles that are now accepted.

(b) There is endless repetition of what has been offered before and will be again, and there are wearisome, wasteful, and futile reviews.

¹ See Part 1 of the *Fifteenth, Sixteenth, and Seventeenth Year-Books of The National Society for the Study of Education*.

This charge has been repeatedly made, but a search reveals little supporting evidence that has been adduced. Hill ¹ declares, after examining 169 courses of study of representative schools, that about 40 per cent of the work outlined for the seventh and eighth grades is review. He concludes: "Some review work is necessary, but to argue that this amount . . . is needed in these grades is a sad commentary on the work of the lower grades. It deprives them of their purpose and discredits the ability of the pupils and their teachers." But inasmuch as the charge overlooks the values claimed for a "special method" of presentation, certainly judgment must be suspended. Much more evidence on the subject is needed. It should be noted that the statement of this charge begs the question: every one will agree that *endless* repetition and *futile* reviews are unnecessary.

(c) There is too much symbolic work and too little of substantial activity.

The first part of this criticism of the elementary school is supported by numerous studies of such subjects as grammar, arithmetic, history, and geography, and by practically all progressive courses of study and new textbooks; the second part is generally approved by educational theorists and by the tendencies of schools that are making any marked changes from old practices. Substantial activities of various kinds are to varying degrees secured in most contemporary grammar grades, and the amount of symbolic work is reduced and deferred to the high school or college.

¹ Bulletin of the Springfield, Missouri, State Normal School, October, 1915.

The acquiring of tools of education is, in theory at least, merged in education itself. To the extent that the indictment is true of schools of to-day it should stimulate activity toward some sort of reform.

Criticism V. The work of the elementary school does not satisfactorily prepare for higher schools.

This criticism is supported by the fact that much, probably most, of the work in the upper grades of the elementary schools bears no relation in the minds of either teachers or pupils to the subjects normally undertaken in the ninth year. The sharp difference is greatest in subject-matter, but it is apparent also in methods of teaching and of study, in discipline, and in the personal relations between teachers and pupils. In these latter respects there is, of course, much variation in the practice of schools; the sharpest difference is usually in the largest high schools where the work is most fully departmentalized. The result of these differences is manifest, it is charged, in the increased percentage of failures and eliminations from school during and at the end of the ninth grade. The figures are startling enough.

The question naturally arises as to the extent to which these deplorable results are inevitable in the eight-four organization. Can they be prevented in it, or in any other distribution of grades, by better administration? On this point there exist no adequate data. There are systems of schools in which separate four-year high schools retain a normal proportion of their entrants at least into the second year of their course; but observation has led to the conclusion that this desired result is usually due more to the traditions and wealth of the community than to any fully de-

veloped administrative plan. There is need of a widespread and careful study of the means by which these occasional high schools are successful. In the meantime each superintendent should frankly face the question as to what kind and amount of modification of the content of courses, of the methods of instruction, and of the program for personal control of pupils is desired in both the grammar grades and in the high schools. It is a lamentable condition, and one easily remedied if a superintendent sets himself to the task, that many principals and teachers are to a very small extent informed of the work and of the definite aims of the proximate grades, either above or below.

Certainly the percentage of failure and of elimination during and at the end of the first year of high school is greater than anywhere else in the system. Secondary-school teachers attribute this to inadequate preparation of the pupils for their work by the elementary school. So far as conditions leading to these results are irremediable in the present organization, they point to a continuous one-twelve school or to the interposition of a junior high school that will be definitely an intermediary between the unified work of the elementary grades and the increasingly differentiated courses of secondary education.

Criticism VI. The progress of pupils in the grammar grades is not marked as in other periods in school life.

This charge may be true, but under present conditions it is impossible to substantiate it. It may be shown that pupils in many schools do not as measured by standarized tests manifest as much improvement in spelling, penmanship, and other such subjects in the grammar grades as they do ear-

lier; neither do men increase in height as much at the age of twenty-five as they did in one year of early adolescence. *If it be assumed that there should be throughout the school system the same rate of progress in subjects that are continued, the change may be proved; but there is no method, except the highly unreliable one of using personal impression, by which one may compare the progress in introductory science with that in primary reading or even with that in advanced chemistry.* Until such a method is found, if ever it be, the satisfactoriness of progress must be evaluated by one or more competent judges in terms of the purposes definitely accepted for the unit considered. It seems, therefore, that this criticism may be laid aside without further consideration.

Criticism VII. In early adolescence pupils do not get the needed influence of teachers of both sexes.

Reports of the United States Commissioner of Education show that there is a constantly decreasing proportion of upper-grade teachers who are men. In 1879-80 of all teachers in elementary schools 42.8 were men; since then the percentage has steadily fallen until in 1917-18 it was only 13.4, and without doubt it is still decreasing. In public high schools the percentage of men teachers rose from 40.0 in 1889-90, the first year for which data are procurable,¹ to 49.9 in 1899-1900, since when it has fallen as shown in Figure 1. The decrease is generally considered as due to the fact that men can make more money at other kinds of work, and that elementary teaching is wo-

¹ All data are taken from the Reports of the United States Commissioner of Education.

men's work. In the criticism there is no implication that men are better teachers than women; the assumption is that there is a need for the example and influence of both men and women on boys and girls who are tending to set their ideals and attitudes toward many matters of life. Exactly what the value expected is, no one knows; and our knowledge of the psychology of sex is too limited to permit of any confident answer. It is probable that the qualities desired in a teacher are much more characteristic of an individual than of a sex. This does not disprove, however, the generally accepted desirability of having both men and women teachers of high quality for pupils of early adolescence. Later it will be shown that in junior high schools the proportion of men teachers is somewhat increased over that in the same grades of the old organization.

Criticism VIII. Elementary or childish methods of teaching are too long continued and too suddenly changed.

There seems to be a tendency of all teachers who are interested in their pupils to adapt the method of instruction directly to the particular group of boys and girls constituting a class. This tendency being strong among teachers

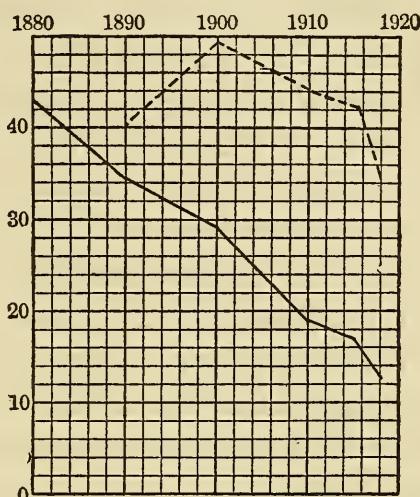


FIGURE 1. SHOWING PER CENTS OF MEN TEACHERS IN ELEMENTARY SCHOOLS AND IN HIGH SCHOOLS 1880 TO 1919.

not wholly absorbed in self or in subject-matter, it probably follows that the criticism is based quite as much on the frequent observation of teaching that is not adapted to the needs of all the pupils in a poorly graded class as on the influence of younger pupils on the teacher. However, in a departmental organization the influence of younger or of older pupils may be strong on a teacher as he moves from one group to another, and it is only trite to say that adults manifest a peculiar unwillingness to recognize and provide for the strengthening demand on the part of adolescents for self-direction. The charge of an abrupt change of method in the high school is generally admitted as being true for a significant proportion of the teachers. There can scarcely be any dissent from the implication that changes in method should be gradual. There exist only inadequate evidence and personal opinion to indicate to what extent the admitted facts are harmful.

Criticism IX. The eight-four organization makes inadequate provision for the varying needs of pupils due to individual differences

- (a) of ability and aptitude;
- (b) of sex;
- (c) of probable career:
 - (1) educational;
 - (2) vocational.

To substantiate this charge, its proponents must make clear that there are in pupils significant differences in the various respects, and that these differences demand for the pupils' best development differentiated educational programs. To find convincing evidence of surprising and in

some cases even astounding ranges of ability in groups usually considered homogeneous, one has only to refer to any of numerous recent studies in the field.¹ It is easy for the proponents to show these facts; it is difficult for them to support so as to convert their opponents the assumption that these differences necessitate in grammar grades differentiated work. If the assumption is admitted, as it probably must be, the criticism is upheld, for, as is shown elsewhere, even the beginning of differentiation is impossible in the usual elementary school.

Mutatis mutandis, a similar situation exists regarding the other two details of the criticism. There is some denial of the statement that in early adolescence boys and girls advance more satisfactorily if segregated in certain subjects; but on the whole the evidence tends to prove it. More and better experimentation is needed before a conclusion can be confidently accepted. In the other case, it is denied that the school can, when a pupil is twelve or fourteen, tell what sort of vocation he will follow; and that, even if it can, differentiated work should be offered before the senior high school. Opinion on this detail will be controlled by the educational ideal accepted for the junior high school.² Those who believe in early differentiation contend that although mistakes will inevitably be made by pupils in the election of curricula, they may later be rectified, and that the mistakes are far outnumbered by the successes. Much more evidence than has been published is needed.

¹ For a succinct and sound summary of some facts about individual differences, see Thorndike's *Individuality*.

² See chapter II and Briggs: "What Is a Junior High School?" *Educational Administration and Supervision*, vol. 5, pp. 283-302.

Criticism X. The eight-four organization causes an unnecessary and unjustifiable elimination, because

- (a) the break between the lower and the upper schools is too sharp; and
- (b) it comes at the wrong time.

The amount of elimination from all our schools between the end of the sixth grade and the beginning of the tenth is, roughly speaking, about seventy pupils of every hundred. The losses during and at the end of grades 7, 8, and 9 have been the greatest, partly because pupils in these grades usually complete the age of compulsory attendance at school, and partly, it is charged, because of the poor articulation between the elementary and the secondary schools. The break between the two parts of the system is emphasized by a marked change in the subjects of study, the organization, the methods of teaching, the discipline, and frequently the atmosphere of the school. A pupil who has "finished" arithmetic, grammar, and the other elementary subjects, under perhaps a single teacher keeping a close watch over him as an individual, may, it is charged, be so reluctant to enter a distant and strange building, undertake new and strange subjects, under several strange teachers, that he finds an easy excuse for dropping out. The "completion" of elementary education is often emphasized, too, by graduation exercises. Thus it is seen that there is no uncertainty of the sharpness of the break. More than this, it does come usually about the time when the law releases pupils from compulsory school attendance; so that having completed one unit of work and not being compelled to undertake another, the pupil of uncertain purpose and ambition finds it easy to

drop out of school. There is considerable evidence showing that if a pupil before being released by the law has entered upon secondary-school work, he tends to persist somewhat longer than if still in the elementary school. This criticism, then, seems well supported.

Criticism XI. There is inadequate provision for personal guidance or direction — social, educational, and vocational — either in the elementary or in the high school.

It is obvious that provision for such guidance varies greatly in different school systems and even in different schools of the same system. But there will be little question that in the light of the recent enlargement of the conception of education and the emphasis on the importance of the individual, more personal guidance than generally found is needed. By and large, the pupil in the elementary school gets more personal attention than he does later, but his teachers are frequently too uninformed of the program of the high school to afford the educational guidance that he needs at promotion, and vocational guidance has in few places satisfied the hopes and expectations with which it is usually hailed. It is believed that this criticism is for the country at large very generally justified.

A review of this summary will show that most of the criticisms are reasonably well justified — so well, at least, that even after recounting all of the credits that justly belong to our schools, an impartial critic is willing to consider any plan that is likely to afford at a reasonable cost a remedy for all or for any of the weaknesses enumerated. The question very naturally follows, however, as to which weak-

nesses are inherent in the eight-four organization and which are merely incidental thereto. A further review will show that although no one can cogently contend that merely because the organization exists it is best, only a few of the criticisms — the second, fourth, and tenth — are of conditions inherent in an eight-four organization. But it is argued that in a new organization all changes can be more easily made than in an old one. There are no traditions among pupils, teachers, or public as to what the junior high school should do, and the very fact that it is a new type of educational institution invites any changes that can be made to appear reasonable. Certainly one who visits junior high schools will find in them a readiness, even an eagerness, to try new programs that promise advantages to boys and girls of early adolescence.

It remains to consider the reasonableness of the junior-high-school program, the extent to which it can remedy admitted defects, and the success that has attended the schools so far established. These matters will be considered in subsequent chapters.

B. ELEMENTARY, INTERMEDIATE, AND HIGH-SCHOOL EDUCATION DEFINED

The purpose of the remainder of this chapter is to present some fundamental facts and assumptions and on them to build statements of purposes that will delimit the fields of elementary, intermediate, and high-school education. Emphasis will of course be laid on the definition and purposes of the intermediate, or junior high school.

In such an organization of education as exists, or as will

exist, in the United States, the most important purposes of the elementary school are conceived to be: first, to furnish the common training necessary for all children "regardless of sex, social status, or future vocation"; and, second, by means of this common training to integrate the future citizens of our democracy.

The former of these two purposes, though seldom explicitly stated, is increasingly influencing the program of elementary schools. Permitting variation in accord with local conditions or with mental endowment of individual children, it demands the searching-out and inclusion in the unified courses of study of those facts, skills, and attitudes that are and will continue to be needed by each and every individual in a community. Each successive report of important committees on courses of study, immediately reflected by progressive textbooks if not anticipated by them, has in the recent past based its recommendations, either tacitly or explicitly, on this principle. In consequence we have during the past generation seen the exclusion from elementary courses of many details of arithmetic, grammar, history, and geography that are, or may be, of value only to those pupils who continue their education beyond the point to which all are expected to progress. Similarly we have seen the inclusion of new elements and even of new subjects that are believed to be essential to adequate living by each participant in our social, industrial, and political life.

The second of the major purposes of the elementary school, to integrate the future citizens of a democracy, has been from time to time presented by educational theorists;¹

¹ Inglis: *Principles of Secondary Education*, chapters III, IX.

but until the discussions of national aspirations subsequent to and during the World War it has never received from course-makers the serious consideration that it deserves. Additional emphasis has been given to this function of the common school by the conflicts apparently growing at present between different social and economic classes, each having inadequate understanding sympathetically to comprehend the position and the contention of the others. It is argued that only if there exists a large body of common facts, resulting in common ideals and prejudices, may a democracy continue to be successful. Certainly men are bound together in proportion as they have common ends and a comprehension of the complex means necessary for their achievement.

Beyond the commonly useful and integrating education there develop programs differentiated according to the capacities, the aptitudes, the interests, and the common needs of individual pupils. Common training is relinquished more or less slowly, it is true; but ultimately those who remain in school are increasingly segregated according to the specialized ends that they seek and their varying abilities to achieve them. The period in which differentiation begins and grows toward complete separation is that of secondary education.

How long a common, integrating education should continue no one can with assurance say. Theoretically it should not cease until the desired ends are reasonably achieved; but in practice it varies greatly in length and in effectiveness. As already pointed out, our elementary schools continue for from seven to nine years in different parts of the country; and the subsequent secondary curriculum in the majority

of high schools as yet offers very little differentiation, and that inadequately adapted to the diverse needs of all youth. The result is that the high schools, by and large, do not furnish, nor do they profess to furnish, training that has a common utility to all, regardless of social status or future vocation, and that integration very largely ceases because of the tremendous elimination of pupils who find the conventional offerings ill-adapted to their capacities, aptitudes, interests, or probable needs. In practice, also, the success of an education that should result in facts and skills of common utility and in integration is conditioned by such varying factors as the length of the school year, the worth of courses of study, the amount of training, the experience, and the skill of teachers, the effectiveness of supervision, the definiteness with which worthy purposes are conceived, and the adequacy of the physical plant and equipment. As a result of such varying factors we necessarily have astoundingly different results from elementary schools, not only in separated sections of the country, but also in urban and rural districts of the same communities and even in contiguous school districts. This situation argues cogently for the equalization of educational opportunity, not only for the sake of individual pupils, but even more for social unity and the consequent welfare of the nation.

Ideally, then, elementary education of the kind defined should continue until its two chief purposes are satisfied. But there are at present other factors determining its upper limit. First of these are the compulsory education laws, which usually prescribe school attendance until a child has completed at least his fourteenth year. Until the laws

are changed and effectively administered, therefore, no education, however wisely planned, can be generally effective for more than eight grades. A second factor is the assumption that if the two desired ends were reasonably achieved by the schools of a generation ago in eight years, the modern elementary school, with its better plant, teachers, supervision, courses, textbooks, and organization, can assure as good results in a somewhat shorter period. A third factor is the assumption that because of assured and inevitable individual differences of various kinds, pupils should, while the law still holds them in school, be given some systematic and intelligent guidance toward their future careers and at least started on suitable differentiated training. These three factors limit the elementary school under existing conditions to approximately six years.

As the end of the period of elementary compulsory education approaches, the school finds three more or less distinct groups of pupils for which it must provide: (1) those who can, and in all probability will, persist at least through the period of secondary education; (2) those who intend to leave school and enter upon work at, or shortly after, the age when the law releases them from compulsory attendance; and (3) those whose length of stay in school is for one reason or another highly uncertain.

If these three groups were sharply and permanently defined, as they have been in certain foreign countries, the problem of differentiated education would be relatively simple. For all pupils the school would seek the main objectives of education ¹ (health, command of the funda-

¹ United States Bureau of Education Bulletin 35, 1918.

mental processes, worthy home-membership, vocation, citizenship, the worthy use of leisure, and ethical character), giving to them special emphasis for the second and third groups of pupils in that there is no assurance that they will get any further instruction to aid them in complete living. For the first group the school would attempt especially to enrich the curriculum and to accelerate the progress; for the second it would advise concerning suitable vocations and prepare each pupil somewhat for the one chosen; and for the third, by work of convincing worth it would endeavor to retain each pupil in school as long as it seems profitable to him and to the State, and so to organize the work as to make it of the maximum advantage to the extent that it may be pursued. Even if the groups were sharply divided, there would be, of course, some common subject-matter.

But in a democracy with such traditions as ours, actively demanding that each individual have the right to seek the career which he may elect and that no course be so closed as to prevent a transfer to some other which may later prove attractive, the problem is much more complex. Compliance with these demands has resulted in much profitless work by pupils: in some instances they sample in the high school one curriculum after another, finally leaving in large numbers with no satisfactory training for the demands either of social or of industrial life; in others, influenced by impossible ambitions or by matters of small educational import, they insist on pursuing studies for which their teachers believe them ill-adapted and in which they have a minimum amount of success. The prejudgment by teachers is proved erroneous, however, in a sufficiently large proportion of cases

to make every one chary of placing the decision at the end of elementary education entirely in their hands.

What program, then, is forced upon the schools by this combination of principles and facts? Clearly an intermediate period of education, beginning one or two years before the law releases any pupil from study, an intermediate period in which the schools shall attempt at least five things: first, to continue, in so far as it may seem wise and possible, and in a gradually diminishing degree, common, integrating education; second, to ascertain and reasonably to satisfy pupils' important immediate and assured future needs; third, to explore by means of material in itself worth while the interests, aptitudes, and capacities of pupils; fourth, to reveal to them, by material otherwise justifiable, the possibilities in the major fields of learning; and, fifth, to start each pupil on the career which, as a result of the exploratory courses, he, his parents, and the school are convinced is most likely to be of profit to him and to the State. When these ends have been accomplished, the law may release pupils from compulsory attendance at regular day schools; sufficient information has been gained to make the election of future study not only intelligent, but also attractive, and each type of higher school or curriculum will receive the pupils for which it was established.

This, in general, is the program that is proposed for intermediate schools, the program in terms of which the facts concerning such schools as have been established will be presented and criticized. It is not assumed that a sudden reorganization of schools on the principles outlined is either possible or probable. The program is presented, however,

as one that will clarify issues and make more profitable the discussion of details that may make for or against the functions proposed; it should, therefore, guide in planning changes from time to time in schools for early adolescents. An ideal must exceed possibilities of entire fulfillment; otherwise it will cease to be of practical stimulus.

In schools of considerable size only can all five of the ends proposed be even reasonably achieved. Therefore the school that is too small or too poor to supply the beginnings of highly differentiated curricula must confine itself to seeking the first four ends proposed, transferring its pupils, after the period of integration and exploration, to such institutions for differentiated work as the State may provide. When, because of economic limitations or of other reasons, higher schools cannot afford the amount of differentiation required, some principles should be accepted to determine what they will offer. The following two principles are proposed: first, such subject-matter shall be offered as promises the largest returns to the social unit that bears the major expense of the school; and, second, this being assured, the offerings shall be determined by needs of the majority of the pupils to be served. Acceptance of these principles will result in revolutionary changes in the programs of small schools; but such changes must inevitably be made — unless, indeed, these principles are denied or the supporting taxed unit is materially enlarged. Even though the State or the Federal Government contribute generously to the support of local schools, as both are likely to do if present tendencies continue, each one must become large enough to make possible considerable differentiation of work, or else

the principles proposed will still be potent in determining the ideal program. When they become effective the school will make a more assured contribution to society as a whole, even though families are forced to provide at their own cost for individual children some of the subjects more generally offered now at public expense, even in the smallest secondary schools.

CHAPTER II

THE DEVELOPMENT OF THE JUNIOR HIGH SCHOOL

A. HISTORICAL SKETCH

A READING of the history of education in the United States reveals that there has never been any general agreement as to the definition of elementary, secondary, and higher schools. As a matter of fact, the influence of European systems was so strong that in the early years there were many "common" and "secondary" schools with overlapping organizations and curricula. Finally, as a compromise necessitated by economy and democratic ideals, elementary schools were organized for the education of all pupils in the first eight years, though in the Southern States and occasionally elsewhere they include only seven grades, and in parts of New England they still include nine years. All of these organizations lead to high schools with similar curricula preparing mostly for colleges. The variety in practice may be seen in the Report of the United States Commissioner of Education for 1911. It states that 669 cities of more than 8000 population had the organizations indicated in Table I.

In the last decade of the nineteenth century there began a series of criticisms of the eight-four organization. These criticisms were based, not primarily, as one might suppose, on the illogical distribution of grades, or on the persistence of traditional offerings by the secondary school in spite of a steady increase of enrollment which tended to include "all the children of all the people," but on the fact that the age

TABLE I

SHOWING THE NUMBER OF CITIES HAVING VARIOUS COMBINATIONS OF GRADES IN 1910-11

<i>Number of cities</i>	<i>Grade combinations</i>
489	8-4
48	7-4
86	9-4
7	8-3
4	8-5
3	7-5
32	Other combinations

of college entrants was higher than many thought reasonable and on the inadequacy of their preparation as judged by the college to do its work satisfactorily.

The history of these criticisms by individuals and committees has been presented by Bunker.¹ Beginning with President Eliot in 1888 and extending through the National Education Association Committees of Ten and of Fifteen, there were recommendations of an adjustment of the lower grades so that the preparation for college might be satisfactorily completed at an earlier age. But all the time there seems to have been growing a conviction, clearly expressed by the Committee on the Articulation of High Schools and Colleges in 1911, that the secondary school should give to all pupils an education justifiable and satisfactory to the extent taken. The declaration of this committee that the function of the high school is "to return to society intelligent, able-bodied, and progressive citizens" educated by enlarged offerings adapted to local communities, is quite different from that of the Committee of Ten, which in 1893

¹ *Reorganization of the Public School System.* Bulletin 8, 1916, of the United States Bureau of Education.

had set forth the function as "to prepare for the duties of life that small proportion of all the children in the country . . . who show themselves able to profit by an education prolonged to the eighteenth year and whose parents are able to support them while they remain so long at school."

Influenced by the several committees of the National Education Association a number of cities during the first decade of this century did divide their schools into something approximating six years of elementary and six years of secondary work; but a study of their statements of programs shows that for the most part the change was merely an extension downward for one or two years of such subjects as algebra and Latin, with more or less departmental teaching. The reorganization was frequently due to peculiar building problems.

During this decade, and for several years following, there developed criticism of the content of secondary-school curricula and of the failure to provide for the needs of pupils differing widely in abilities, interests, and probable future schooling; and with this criticism there went claims, many of them extravagant, for an intermediate or junior high school. A reading of the addresses, committee reports, and magazine articles reveals many varying conceptions of the new type of school, but a consistency of claims. The movement, which was distinctly from above, being initiated and developed by administrators and educational theorists, "inflamed the imaginations of schoolmen"; and out of the discussions came a fixation of interest and a consciousness of needs, especially of pupils as individuals.

With eyes fixed on the claims rather than on the funda-

mental conceptions of an intermediate school, superintendents began widely to reorganize their schools, often with inadequate building and equipment, teachers, curricula, courses of study, textbooks, preparation for articulation with lower and higher schools, and with other handicaps. This fact should constantly be kept in mind when one criticizes the achievement of junior high schools that were early established. In the larger cities the change was frequently made in only a part of the system, sometimes as an experiment and sometimes because it was possible for local reasons to make the change only gradually.

The active development of the junior-high-school movement may be said to have begun in California with the reorganization in Berkeley by Bunker in 1909 and in Los Angeles by Francis in 1910. Since that time it has spread rapidly. After an interruption by the World War, it has apparently taken on a new impetus, especially in the cities, and is extending in all parts of the country.¹

The years in which the 272 junior high schools reporting on this item were established may be seen in Table II.

TABLE II

SHOWING THE YEARS IN WHICH 272 JUNIOR HIGH SCHOOLS WERE ESTABLISHED

Year	Number	Year	Number
Before 1900.....	2	1912.....	21
1905.....	1	1913.....	27
1907.....	1	1914.....	44
1908.....	3	1915.....	76
1909.....	3	1916.....	68
1910.....	11	1917.....	6
1911.....	9		

¹ Details as to the extent of the movement will be found on pages 56-64.

The fact that the number decreases after 1915 must not be interpreted as evidence that the peak of the movement had been passed; it means, rather, that the more recently established schools were not known and so did not receive the questionnaire.

As suggested above, the reorganization of schools on the 6-6, 6-3-3, or 6-2-4 plans was not always due primarily to a conception of definite programs for educational reforms. In some instances a superintendent had an outgrown high-school building which was too good to destroy and yet not suited for all the elementary grades; in others there was a growth of population in a section of the city remote from the existing high school; in others still there was overcrowding that could best be relieved by a building in which pupils of the upper grades and the first year of the high school could be congregated. These and other similar conditions not infrequently were the cogent reasons for reorganization. Some critics were hostile to a movement that frequently was not based on a clear conception of educational advancement, one suggesting that unless there is "a definite program for the reform of the curricula, of the courses of study, of the methods of teaching, and of the social administration of the intermediate grades," reorganization should be left to better men. But it must be admitted that junior high schools, even when established for purely administrative reasons, have in many instances made desirable advance in educational matters so as to justify themselves. There is in the intermediate schools to-day a receptivity that puts a grave responsibility on educational leaders and that promises well for the future.

TABLE III

THE CHIEF REASON GIVEN BY EACH OF 266 JUNIOR HIGH SCHOOLS
FOR THEIR ESTABLISHMENT

To provide	
educational opportunity.....	60
for earlier differentiation.....	15
for more intelligent election.....	1
for sex segregation.....	1
better for grades 7, 8, 9.....	21
better for grade 9.....	1
for children not adapted to high-school methods.....	1
for children of the industrial classes.....	3
for children leaving school early.....	4
for earlier college preparation.....	1
for accelerator pupils.....	1
To increase retention.....	18
To increase the enrollment.....	1
To bring the high school nearer homes of pupils.....	1
To reduce retardation.....	1
To reduce failures.....	1
To secure better scholarship.....	1
To secure better organization.....	9
To bridge the gap between elementary and high school.....	15
To reduce costs.....	6
To save time.....	4
To relieve congestion.....	36
To utilize old high-school building.....	26
To use the entire plant.....	1
To enrich curricula.....	3
To vitalize education of adolescents.....	1
To increase interest.....	2
To introduce foreign languages earlier.....	2
To introduce prevocational work earlier.....	11
To serve rural community better	4
To provide a community school.....	1
To secure better teaching.....	3
To introduce departmentalization.....	6
To provide a demonstration school for university.....	3
To keep up with the times.....	1
Total.....	266

The chief reason given by 266 junior high schools for their establishment may be found in Table III. It will be noted that these reasons vary greatly, that they overlap, and that in many cases they are probably the expression of a hope rather than the reflection of a clearly conceived program.

The chief stimulus for the establishment of junior high schools, as reported by 265 cities, has been widely varied. The distribution may be seen in Table IV.

TABLE IV
SHOWING THE CHIEF INFLUENCES IN THE ESTABLISHMENT OF 265
JUNIOR HIGH SCHOOLS

Board of Education.....	29
Superintendent of Schools.....	225
County Superintendent.....	2
Principal of High School.....	2
Principal of Grammar School.....	3
Teachers.....	1
Colleges.....	2
Community.....	<u>1</u>
	<u>265</u>

What influences lay beyond those stated one can only guess; but the effect of the early work of such men as Charles Hughes Johnston may still be seen in Kansas. There is no question that college departments of education stimulated and directed many of those who directly caused a reorganization of the schools.

B. MAJOR TYPES OF CONCEPTION

An analysis of discussions and experimentation shows that there are three major conceptions of the purpose of the junior high school: first, that it should afford an earlier

beginning of a more or less conventional secondary education; second, that it should furnish trade training for those who will soon enter work; and, third, that it should explore the interests, aptitudes, and capacities of pupils and start each upon studies leading to a suitable goal. Often the junior high school is conceived as serving two or more of these functions at the same time.

Earlier beginning of secondary education. Influenced by European practice, this conception was not uncommon in the United States long before the junior-high-school movement began. For a number of years the Boston Latin School has received for a six-year secondary course pupils who were prepared to enter the regular seventh grade, and many, perhaps most, of the "fitting schools," especially in the East, begin their preparation for college at approximately the seventh grade. These schools are for pupils who not only are assured of the opportunity for education in college or university, but who also for the most part have had superior advantages in their elementary schools and in their environments, at home and often in travel. For such selected pupils the curriculum should be considerably enriched or else completed in one or more years fewer than normally required. But not even in the published programs do these selected pupils equal their fellows in European schools.

The extension to the public school of such an earlier beginning of secondary education involves the difficulty of ascertaining which pupils can and probably will continue their education beyond the high school and at the same time have the peculiar aptitudes and abilities required for

the *belles-lettres* curriculum. The custom with us has been not only to permit, but also to encourage, every pupil to aspire to the most advanced academic and professional education offered by secondary and higher schools. The result is that many a parent makes extreme sacrifice¹ to secure for his children an education for which they may be in no manner naturally endowed. This American ambition — to secure for the next generation a better lot than that of their parents — does make this the land of opportunity, but it also makes its schools institutions of amazing waste. As at present organized, the college preparatory curricula afford a minimum contribution to the pupils who after pursuing them for from one to four semesters transfer to trade curricula or leave school for work.

The alternative seems to be the restriction of academic preparatory courses to such pupils as manifest by their elementary-school records or by mental tests ability to pursue them successfully or else to leave the responsibility, as largely is the practice at present, to the individual pupil and his parents. The former plan is as yet somewhat inaccurate in its prognosis; the latter assures large losses — in finances to the community, in spirit, outlook, ambition, and self-confidence to pupils who try and fail, in retarded and limited progress to those who have the ability and aptitudes to succeed, and in faith in the schools to parents and other taxpayers. Certainly neither alternative makes this conception of the junior high school satisfactory.

Earlier beginning of trade training. The second con-

¹ See Strayer and Thorndike: *Educational Administration*, pp. 69-73, summarizing Van Denburg's study of persistence of high-school pupils.

ception of the junior high school is based on a desire to provide for the large number of boys and girls who leave school at or soon after the close of the compulsory education period. In European countries, where birth and economic status have largely determined possibilities of future vocations, and where tuition fees have been charged for all secondary education, the task has been relatively simple: on the basis of a brief elementary education each pupil has been trained for his predestined lot in life. American democracy has consistently demanded that for every pupil education shall be open at the top so that he may proceed as far as his interests, abilities, and ambitions may carry him. This demand has in the past largely prevented adequate provisions for the pupil who, with or without the approval of his parents, has elected not to remain in school for such offerings as it provided.

The objections to the conception that would make the junior high school a trade-training institution are four: first, that it is undemocratic to make an early segregation of pupils on the basis of future vocations, thus prematurely stopping the common education that makes for common understandings and integration; second, that because of the social stigma often attached to the vocational curricula, or rather the positive social distinction associated with the academic, it is difficult to secure registration for vocational training by many pupils most in need of it; third, that it is impossible to foretell with anything like accuracy at the age of twelve or thirteen what specific trade a pupil will or should follow; and, finally, that the concrete work and novelty of trade courses attract and send prematurely to

wage-earning many pupils who can and should have extended education, either academic or technical. Such objections have influenced the British¹ in their recent reform to provide for pupils up to the age of eighteen only an education of broad nature, preparing youth for the general life that he soon will enter — education, that is, leading to a sound physical body, to a knowledge of the fundamental laws of health, to the wise use of leisure, to effective home-membership, and the like. As shown elsewhere, however, there is widespread approval of specific trade-training in American junior high schools for pupils, especially those over-aged, who cannot be retained by any other means and who have determined on an early entrance on wage-earning.

Despite the difficulties there is a steady increase in dignity and in popularity of the vocational curricula — so much so that there are constant expressions of alarm from those who believe education to be merely "book learning." To an observer of many schools the danger seems to be rather that the vocational courses are too frequently in themselves formal and not sufficiently supported by general courses adapted to assured and early needs than that they are increasing in number and importance. So long as we continue our policy of permitting mistakes of election to be rectified whenever a pupil accepts a different life aim, there is small chance that the United States will train too large a proportion of its pupils for skilled and semi-skilled industrial careers.

Although a constantly increasing number of schools are offering more or less acceptable curricula designed for pupils who will leave at the age of fourteen to sixteen, most of

¹ Educational Bill, 1918.

them offer the academic curricula too. The Lafayette Bloom Junior High School of Cincinnati is a conspicuous example of an institution with a single aim, the training of youth who are likely to get no further schooling. This school, which contains ten grades beyond the kindergarten, is located in a neighborhood populated by working-men and their families. If at any time after a pupil completes the eighth grade it becomes reasonably certain that he will continue through a regular high-school course, he is transferred to one of the city cosmopolitan high schools. For those who remain courses are offered that will contribute to their more effective living. Some of the courses might well be deferred until later if there were any assurance that the State would get another chance to continue its education of the pupils. One of these courses presents some fundamental conceptions of economics, a subject usually presented only in college, but recently offered, often with apologies for its incompleteness, in larger senior high schools. Principal Gosling argued that there was no attempt to cover the subjects as outlined in texts for mature students, but rather to present in a simple manner some fundamental conceptions of wealth, poverty, capital, labor, etc., that should be possessed by every citizen whatever his occupation. The alternative was conceived to be the inaccurate and misleading information fortuitously conveyed by the press and the political orator.

Two other courses in the Bloom School may be cited as illustrative of this type of work — one in the care of children, which is outlined elsewhere,¹ and the other in the in-

¹ See page 164.

telligent use of books. This latter course was given in the public library, near which the school is very properly located. Once a week certain of the pupils were taken to the library in the morning, when the adult public is seldom there in numbers, and taught the classification of books on the shelves and the use of the card catalogue and the more important books of reference. At this time, too, pupils were under guidance permitted to look up topics assigned by teachers of other classes. After the formal instruction the pupils were permitted to browse through the shelves and to "sample" books to which they were attracted. Such sampling gave a stimulus to the drawing of books for home reading and afforded an exceptional opportunity for the teacher by personal conferences and suggestions to direct the interests of the pupils and to improve the quality of the reading. Another period each week the pupils spent in the library taking a course in contemporary biography. Books and articles containing information regarding men and women important in the world's work were found and read, and the reports were followed by discussion. The possibilities of such courses are obvious.

The advantages of this second conception of the junior high school are, that it will afford to some pupils who need it a training in a trade by which they may make a living, and at the same time retain them in school to get some preparation for other phases of life and to receive from association with pupils with other futures and from extra-curricula activities an integration that makes for democratic society.

Exploration. The third of the more important conceptions of the junior high school proposes not so much to

save time for each pupil by an earlier beginning of specific preparation for his chosen or destined work in life as it does to spend two or three years in assuming that differentiation is as intelligently as possible made. In other words, it proposes to explore by means of material in itself worth while the interests, aptitudes, and capacities of the pupils, and at the same time to reveal by material otherwise justifiable the possibilities in the major fields of activity, both intellectual and industrial. Exceptions may be made for those pupils who assuredly will continue their education through the high school or for those who assuredly will enter early on work.

This program is exemplified frequently by "try-out" courses, somewhat valuable for those who do not continue the work. The procedure is to an extent justified by the fact that it is more economical for a pupil to experiment at the age of twelve to fifteen than it will be two or three years later. It may be noted at this point that it is as truly an achievement for a pupil to learn early that he does not have an aptitude for a particular study as that he does, or for him to learn that a vocation does not have for him the possibilities for advancement that he demands as that it does. An intermediate school in New York City offers "try-out" courses for boys in sheet-metal work and for girls in power-machine sewing, vocations that draw heavily on the neighborhood for workers. The result, however, is that the boys and girls who take the courses seldom on leaving school follow the trades, having learned by their experience and visits to shops of the poor working conditions, unsatisfactory wages, and limitations on advancement.

An acceptance of this fundamental aim of the junior high school demands that it offer the possibility of a great deal more than merely a "try-out." The courses should be formulated so as to be primarily of value to each pupil, whatever his future election, so as to stimulate him toward the highest career for which he may prove to be fitted, so as to furnish a sound foundation for his future studies in the same field, and finally, so as to integrate the whole social group. It is reasonable to expect that as the course progresses there will be an increasing differentiation, so that at the end of the ninth or tenth grade the pupils will very generally have settled into curricula leading to their general fields of life-work. This does not mean that mistakes in election cannot after this time be remedied; it does mean, however, that changes in purpose will be penalized by some months of additional study. The ninth grade was used by Cox at Solvay, New York, and later at St. Louis as an "adjustment year."

This conception of the junior high school requires more reorganization of courses of study in particular subjects than does either of the other conceptions that are widely held, and so far relatively little has been achieved in formulating exploratory courses which at the same time lead to other highly desired and assured results; but the ideal is widely accepted, and here and there courses are being constructed or revised to achieve it. Progress of this nature will necessarily be slow until the contributions of many teachers are combined and made widely public.

The report of the English Committee of the Commission on the Reorganization of Secondary Education ¹ accepts

¹ Bulletin 2, 1917, of the United States Bureau of Education.

this as one of its fundamental purposes, as do the reports of several of the other committees working under the National Education Association Commission on the Reorganization of Secondary Education. Lodge ¹ has outlined such a course for Latin, and a similar one has been taught at the Washington Junior High School, Rochester, New York, under the direction of Dr. Mason D. Gray, and at Neodesha, Kansas. Such exploratory courses in modern foreign languages, of assured worth however briefly continued, would necessitate the early introduction, along with common vocabulary and simple constructions, of the history of the people who speak the language, of the geography of their country, of the details of their private life, of the national character and aspirations, of literature in translation, and of the contributions of the language to English.

Nearly all of the recent junior-high-school textbooks in mathematics exemplify with varying degrees of consistency the worth-while exploratory course, emphasizing various assured practical uses of arithmetic and introducing the more commonly used operations of algebra, constructive geometry, and even of trigonometry that are likely to be of value whether the subject is continued or not. Most of the numerous general science texts have this conception as their implied or clearly enunciated basis. And it is not difficult to conceive of a general social-science course, drawing its materials from history, civics, sociology, and economics, to give an elementary understanding of the various fields and to aid in solving some of the problems that will soon lie before every pupil as a citizen.

¹ *Teachers College Record*, vol. 18, pp. 113-21.

Consistent courses in fine arts and music will deal much more with appreciation than they generally do at present. While learning to draw, paint, and design as they are likely to be called on to do later in life, boys and girls will be taught something of the world's masterpieces of painting, sculpture, and architecture. Music will not merely give a knowledge of chorus singing and a love for it; it will also teach the major forms of composition, the instruments of band and orchestra, and the themes of great masterpieces. As pupils' tastes are formed in both fine arts and music, teachers will discover particular aptitudes and skills which should receive encouragement and training in differentiated courses.

Industrial work for boys, whether the all-round shop for the small school explained by C. A. Bowman in the *Manual Training Magazine* (vol. 18, pp. 177-80) or the rotation shop-work practiced in New York (the Ettinger Plan), in Rochester, in Duluth, in Grand Rapids, and in many other places, looks toward this ideal. To be most effective for this purpose, however, this type of industrial work should be supplemented by a study of occupations, both from books and from field trips to shops and factories. The industrial work for girls will contain elements not only of sewing and cooking, but also of millinery, nursing, household economics, and home management.¹

It is argued by the proponents of this plan of exploration that it should be prescribed for all, or nearly all, pupils re-

¹ See Cooley and others, *Teachers College Record* vol. 19, pp. 119-30, 229-58, 369-89; and for bibliography see Bulletin 46, 1919, of the United States Bureau of Education.

gardless of the definiteness of their life ambitions, for the purpose of integrating the whole social body. The youth who is likely to be an industrial worker should have some glimpse of the fields in which his fellow academic student must work in preparation for a professional career, and the latter should learn some of the difficulties to be overcome by the former in order that each may to some extent understand and appreciate the other's complementing contribution to the world's work. To what extent this ideal in a democracy can be attained remains to be seen. As an ideal it is likely to be generally accepted.

The purpose of this section is to set forth the three major conceptions of the junior high school which are to-day contending for general acceptance, and to emphasize the necessity of a clear understanding of more or less conflicting purposes before any extensive reorganization is made. Ideally the arguments seem most cogent for an intermediate school of the exploratory type, but doubtless many compromises involving the two other types will be necessitated by the lack of complete programs, adequate teachers, and equipment, or by certain local conditions, such as the character and traditions of the population in a community and laws for compulsory school attendance.

C. DEFINITIONS

The various names assigned to the new type of school give little or no clue to the conception held by the founders. Junior high school, intermediate school, junior school, departmental school, and other names alike indicate the institution established to improve the education of pupils of early

adolescence. Probably in the minds of those who invented the names, the intermediate school was conceived primarily as a transition between the elementary grades and the high school, and the junior high school as an institution to complete the education of those pupils who expect to enter on work about the age of fifteen. But at the present nearly all junior high schools attempt both functions. In California the name intermediate school is general; in the North Central territory 57.3 per cent bear the name junior high school, which is most frequent elsewhere in the United States.

There are three methods of securing a definition of the new institution. The first is to state an individual opinion; the second is to use the laboratory method — examine a large number of intermediate schools that are said to be reorganized and use the common elements as a basis for definition; and the third is to secure the composite opinion of men who are most competent to judge what a junior high school is or should be.

During the past decade many individual definitions have been made.¹ All of these are interesting, of course, as revealing a varied and developing conception of the new type of school; but each has only the validity resulting from the vision of its author. For several reasons it is difficult to compare these individual definitions, as some are positive while others are negative; they are based on purposes, results, organization, administration, curricula, methods of teaching, age of pupils, and the like; they often are in terms of what ideally should be, unqualified by the limitations of

¹ A number of these are quoted by Douglass in *The Junior High School*, pp. 14-16.

practical application; and they nearly always are stated in condensed form, the elements determined by the particular purpose for which they are presented. After all, as Augustine Birrell has said of Liberalism, the junior high school is not at present a definite institution, but rather a state of mind, or a striving to achieve a vision, either limited or extensive.

Charles Hughes Johnston,¹ one of the pioneers in secondary-school reorganization who had wide information and an even wider vision, wrote that the junior high school

is the name we have come to associate with new ideas of promotion, new methods of preventing elimination, new devices for moving selected groups through subject-matter at different rates, higher compulsory school age, new and thorough analysis of pupil populations, enriched courses, varied and partially differentiated curriculum offerings, scientifically directed study practice, new schemes for all sorts of educational guidance, new psychological characterizations of types in approaching the paramount school problem of individual differences, new school year, new school day, new kind of class exercise, new kinds of laboratory and library equipment and utilization, and new kinds of intimate community service.

Other features that he specifically mentions elsewhere are provision for the over-age pupil, better teachers and better supervision, increased exploration facilities, project and other like methods of instruction, discipline adjusted to early adolescence, departmental teaching, and design in curriculum organization. "Curriculum differentiation," he says, "is the crucial issue."

A large number of individual definitions have been collated, however, and the results presented² so that one may

¹ *Educational Administration and Supervision*, vol. 2, pp. 413-24.

² Briggs: "A Composite Definition of the Junior High School," *Educational Administration and Supervision*, vol. 6, pp. 181 ff.

see what elements have seemed to those interested in the movement of most importance. The percentages in this composite definition, which may be seen in Table V, should not be understood, however, as indicating the relative importance of the items; for if all the items were marked even by the authors quoted, the results would probably be different.

TABLE V

SHOWING THE PER CENT OF 68 INDIVIDUALS WHO INCLUDED EACH ITEM IN A DEFINITION OF THE JUNIOR HIGH SCHOOL

<i>Items</i>	<i>Per cent</i>
Provisions for individual differences.....	64.7
Departmental teaching.....	51.5
Retention in school.....	48.5
Differentiated curricula.....	41.2
Combination of grades 7, 8, 9.....	41.2
Enriched curricula.....	39.7
Promotion by subject.....	39.7
Gradual transition.....	36.8
Economy of time.....	29.4
Homogeneous grouping.....	23.4
Exploration of interests, aptitudes, and capacities.....	22.1
Supervised study.....	20.6
Vitalized instruction.....	20.6
Provisions for adolescence.....	20.6
Segregation (distinct educational unit).....	19.2
Flexible curricula.....	16.2
Provisions for social interests.....	16.2
Prevocational training.....	14.7
Reorganization of subject-matter.....	10.3
Satisfaction of community needs.....	10.3
Elimination of undesirable subject-matter.....	7.4
Educational guidance.....	7.4
Vocational guidance.....	7.4
Vocational or trade training.....	7.4
Encouragement of initiative.....	5.9

One careful attempt to define the junior high school is that by Lewis.¹ He sets up the following ten standards:

1. Entrance requirements. It is proposed that the entrance requirements for a junior high school shall provide for the admission of three different groups of children: (a) those regularly promoted from the previous grade; (b) those of 14 to 21 years of age and of uncertain or low educational attainments; and (c) many ambitious children who have left school, but desire to return for more education.

2. Classification of pupils. Seven bases are proposed: maturity, ability to learn and to do, probable future schooling, natural capacity and interest, command of the English language, marked physical and mental abnormalities, and sex.

3. Grades included. Preferably 7 to 9.

4. Housing. No one of the four plans recommended.

5. Methods of promotion. By subjects, semi-annually.

6. Number and kinds of curricula. "Every junior high school should maintain at least two courses: a general prevocational course largely free from the so-called high-school subjects and open to children who will probably not enter the senior high school; the second course should be a literary or high-school preparatory course for those intending to enter the senior high school."

7. Departmentalized instruction.

8. Preparation of teachers. "All teachers shall be graduates of a four-year high-school course or its equivalent. In addition they shall be graduates of a standard normal school with at least one year of practice-teaching experience or they shall have had at least two years of college work, with preparation in the branches to be taught, with practice-teaching experience. Furthermore, all teachers shall be required to have had two years of distinctive successful teaching experience, preferably in the grades, and show some evidence of professional interest, training, and study before being employed to teach in junior high schools. Better still, all should be college graduates, with practice-teaching experience and one year of successful classroom experience in the grades. It is

¹ "Standards for Measuring Junior High Schools," *University of Iowa Extension Bulletin*, No. 25.

desirable that special preparation should be made during the college course to teach one or two subjects."

9. Pupil advisory system. A systematic scheme for educational, vocational, and personal advice.

10. Supervised study.

The North Central Association in 1918 adopted the following definition and statement of aims:

The junior high school shall normally include the 7th, 8th, and 9th years of public-school work. The junior-high-school organization and administration shall realize the following aims and purposes:

1. To continue through its instructional program the aims of public education in a democracy.

2. To reduce to the minimum the elimination of pupils by offering types of work best suited to their interests, needs, and capacities.

3. To give the pupil an opportunity under systematic educational guidance to discover his dominant interests, capacities, and limitations with reference to his future vocational activities or the continuance of his education in higher schools.

4. To economize time through such organization and administration of subjects and courses both for those who will continue their education in higher schools and for those who will enter immediately into life's activities.

The New International Dictionary, advised by experts in education, defines the junior high school as:

A school organization intermediate between the grammar school and the high school, formed by a union of the upper grades of the grammar school usually with one, and occasionally with two, grades of the high school, making a separate group and aiming to provide for individual differences among students and also to facilitate transfer from the grammar school to the high school, especially by allowing a limited amount of election of studies and by employing departmental teachers.

Because of the wide variability in junior high schools a laboratory study of their practice can yield no satisfactory

definition at present. On this basis one can say scarcely more than that the junior high school is an institution for the education of boys and girls of early adolescence.

There are some data, however, that contribute to a definition on this basis. In the questionnaire principals were asked to check each of four phases of a definition to indicate which characterize their schools. Following is the definition with the number and per cent of 275 schools checking each part:

The junior high school is a special organization of one or more grades of 7 to 10 —

- a. Providing by various means for individual differences, especially by an earlier introduction of prevocational work and of subjects usually taught in the high school. (204, or 74.2 per cent.)
- b. Providing departmental teaching, promotion by subject, differentiated curricula, and special attention to extra-class activities. (246, or 88.7; with 3, or 1.1 per cent, saying "partial.")
- c. Providing by means of extensive and practical courses exploration for the pupils of various fields of learning and of the pupils' own interests, aptitudes, and abilities. (137, or 49.8 per cent; with 13, or 4.7 per cent saying "partial.")
- d. Providing training particularly to fit for life the pupils likely to leave school before completing the senior high school. (151, or 54.9 per cent; with 14, or 5.1 per cent saying "partial.")

The third method, the formulation of a definition by the composite opinion of men who have shown the most interest in the new type of institution, has been used twice.

Childs¹ reports that twenty-five Indiana superintendents of schools gave to eighteen items in junior high schools the following relative ranks:

¹ *Reorganization Movement in the Grammar Grades of Indiana Schools*, p. 17.

A. Subject modifications:

1. Reorganized courses of study.
2. Opportunity for pupils to take more extensive offerings in prevocational subjects than the minimum state requirements.
4. Opportunity for pupils to take some subjects of the high school earlier, as foreign languages or algebra.

B. Revised methods:

5. Departmental teaching.
8. The use of the same teachers as in the senior high school, both in academic and special subjects.
9. Reorganized methods of teaching.
10. Provision for supervised study.

C. Organization:

6. Close contact of grammar-school grades with the senior high school with respect to housing and the use of laboratories and equipment.
- 15.5. A distinctive organization separate from the elementary grades and the senior high school.

D. Provisions for individual differences:

3. Provision for greater differentiation of curricula than under the old conditions.
7. Promotion by subject.
11. Provision for rapid advancement of bright groups.
18. Opportunity for over-age pupils regardless of their scholastic attainments.
- 15.5. Shortening the period of elementary- and high-school training by one year.
17. Provision for specific training along lines of interest and ability.

E. Provision for exploration and guidance:

- 12.5. Provision for educational and vocational information and guidance.
- 12.5. Opportunity to discover interests and capacities.
14. Better organization of pupils' social activities.

Briggs¹ used a more comprehensive series of items and

¹ *Educational Administration and Supervision*, vol. 5, pp. 283-301.

a larger number of judges (16 professors of education, 8 state superintendents of schools or their representatives, 19 city superintendents, and 18 principals of junior high schools) to secure a similar composite definition. Following are the items with the percentage of the judges voting each (A) as essential, (B) as desirable, and (C) as either essential or desirable. Numerous qualifications to the answers are quoted in the article from which these data are taken:

TABLE VI

SHOWING PER CENTS OF APPROVAL OF DEFINITION UNITS

1. A distinct educational unit, (A, 54.1; B, 14.8; C, 68.9.)
2. separated in organization from the elementary grades, (A, 62.3; B, 24.6; C, 86.9.)
3. separated in organization from the senior high school. (A, 41.0; B, 44.3; C, 85.3.)

Combining the school years

4. 7-8 (A, 9.8; B, 9.8; C, 19.7.)
5. 7-9 (A, 41.0; B, 54.1; C, 95.1.)
6. 7-10 (A, 11.5; B, 19.7; C, 31.2.)
7. Other combinations. (A, 4.9; B, 4.9; C, 9.8.)
8. Suitable for all pupils approximately 12 to 16 years of age. (A, 72.1; B, 18.0; C, 90.1.)

Seeking

9. to retain pupils longer in school, (A, 72.1; B, 23.0; C, 95.1.)
10. to provide curricula of a vocational character for pupils who will assuredly leave school early, (A, 59.0; B, 31.1; C, 90.1.)
11. to provide a more gradual transition to higher schools, (A, 78.7; B, 14.8; C, 93.5.)
12. to accelerate in varying degrees all pupils who will continue in school, (A, 67.2; B, 29.5; C, 96.7.)
13. to explore pupils' interests, (A, 80.3; B, 16.4; C, 96.7.)
14. to explore pupils' aptitudes, (A, 83.6; B, 14.8; C, 98.4.)
15. to explore pupils' capacities; (A, 80.3; B, 14.8; C, 95.1.)
to explore for the pupil by means of material in itself worth while:

16. possibilities in the major academic subjects, (A, 59.0; B, 32.8; C, 91.8.)
17. possibilities in several industries of local importance. (A, 49.2; B, 39.3; C, 88.5.)

Providing for individual differences

18. by differentiated curricula, (A, 77.0; B, 19.7; C, 96.7.)
19. gradually increasing in differentiation, (A, 73.8; B, 21.3; C, 95.1.)
20. fully differentiated as early as the future of pupils is known with reasonable definiteness. (A, 24.6; B, 32.8; C, 57.4.)

This approves in the junior high school

21. real vocational training for pupils who with their parents' consent decided to enter a trade about the age of sixteen, (A, 16.4; B, 42.6; C, 59.0.)
22. earlier direct preparation for higher education for pupils likely to continue school; (A, 41.0; B, 41.0; C, 82.0.)
23. by the organization of groups homogeneous in ability. (A, 27.9; B, 69.2; C, 96.1.)

Using methods of teaching

24. between those of the elementary school and those of the high school, (A, 72.1; B, 13.2; C, 85.3.)
25. including many projects, (A, 59.0; B, 31.1; C, 90.1.)
26. encouraging initiation on the part of pupils. (A, 75.4; B, 14.8; C, 90.1.)

Using departmental teaching

27. partial, (A, 42.6; B, 8.2; C, 50.8.)
28. full, (A, 29.5; B, 23.0; C, 52.5.)
29. a gradually increasing amount. (A, 45.9; B, 19.7; C, 65.6.)
30. Using promotion by subject. (A, 73.8; B, 19.7; C, 93.5.)

Providing curricula

31. enriched beyond those commonly found for pupils 12 to 16 years of age, (A, 85.3; B, 11.5; C, 96.8.)
32. flexible to suit individual needs. (A, 83.6; B, 14.8; C, 98.4.)

Reorganizing courses of study

- so as to eliminate material justified for the most part
33. only by traditional practice, (A, 80.3; B, 18.0; C, 98.4.)
34. only by the logical organization of subject-matter, (A, 70.5; B, 23.0; C, 93.5.)

35. only by deferred values, (A, 29.5; B, 34.4; C, 63.9.)

So as to meet assured

36. immediate needs, (A, 50.8; B, 27.9; C, 78.7.)

37. future needs. (A. 47.5; B, 32.8; C, 80.3.)

Providing systematic guidance for each individual pupil

38. educational, (A, 65.6; B, 32.8; C, 98.4.)

39. personal, (A, 68.9; B, 27.9; C, 96.7.)

40. vocational. (A, 57.4; B, 41.0; C, 98.4.)

41. Emphasizing extra-curriculum activities of various kinds.
(A, 50.8; B, 44.3; C, 95.1.)

42. Granting an increased amount of opportunity to pupils for participation in the social administration of the school.
(A, 52.4; B, 37.7; C, 90.1.)

As, separate items, not necessarily included under this head:

In discipline

43. by some form of self-government, (A, 24.6; B, 54.1; C, 78.7.)

44. by advisory councils. (A, 26.2; B, 59.0; C, 85.2.)

From these data any one can make his own definition of what a junior high school is or ought to be. It certainly would be unwise, however, at this time to consider any definition as more than tentative, to be modified as the needs of early adolescence and the possibilities of the institution are more clearly seen.

D. EXTENT OF THE JUNIOR-HIGH-SCHOOL MOVEMENT

A question frequently asked is, How many junior high schools are there? Any satisfactory answer to this question must start with a generally accepted definition, and this, as we have already seen, does not exist. Under the circumstances, then, we can do no more than attempt to ascertain how many junior high schools are reported and claimed by those who reply to letters of inquiry.

The method pursued in this study to secure an approxi-

mate reply to the question was, first, to collate all of the tentative lists that had been made of junior high schools; second, to send this list to each State Department of Education, with a request that it be supplemented; third, to write to each principal asking if he considered his school of the new type; and, fourth, to send an extended questionnaire to all who replied affirmatively to the first or to a follow-up inquiry, and to those from whom no reply was received. These questionnaire replies represent conditions as they were in the spring of 1917.

As might be expected, a great deal of confusion was caused by the replies, especially when they were supplemented by data from other sources. For example, one principal reported that he did not have a junior high school, yet the Assistant Superintendent had two months previously conducted the inquirer to the very school as an illustration of what the city was attempting by way of reorganizing intermediate grade education. A denial was received from Boston, yet in Superintendent Dyer's Annual Report for 1917 appears: "At the present time the third year or ninth grade has been developed and is in operation in ten districts. The School Committee has by a definite order recognized the intermediate department as a part of the school system." The ninth grade of this department has relieved the high schools of more than eight hundred pupils. A number of places were recorded, and are still being recorded in reports, as having junior high schools, though the principals do not themselves make the claim. Beverly and Medford, Massachusetts, come in this category. The State Inspector of High Schools of North Dakota records in his Re-

port for 1917 the following, which do not appear in any general list and for which this report has no data: First Class Junior High Schools: 2, and 4 in part; First Class Six-Six Plan: 3; Second Class Junior High Schools: 1, and 2 in part; Second Class Six-Six Plan: 2, and 2 in part; Third Class Junior High Schools: 2 in part; Third Class Six-Six Plan: 1, and 1 in part. And the University of Illinois High-School Visitor records in his Report for 1917-18 the following accredited junior high schools of which we have no other record or from which no reply was received: Belleville Township, Chicago (the Lucy Flower Technical School), Dundee, Monmouth, Normal, St. Charles, Urbana, and Woodstock. Doubtless there were also other junior high schools of which no record was found.

A report that a junior high school is at a place is frequently — perhaps usually — an indication that a reorganization is contemplated, even though the principal or superintendent does not reply to inquiry or denies its existence. Davenport, Iowa, for example, denied having a junior high school in 1917, yet it had just voted \$850,000 to build three; Jackson, Michigan, had none in 1917, yet a year later it opened two at a cost of \$700,000; Lexington, Kentucky, and East Syracuse, New York, are other cities that reorganized their schools soon after the inquiry was finished. A considerable number of places that denied having junior high schools replied that "one may be opened next year."

Critics on going over the list express surprise that a junior high school is claimed in this place or is denied in that, of which they have personal knowledge. It is all a matter of definition. One illustration of the difference in conception

will suffice. From an unpublished study by the Council of Education of the State of New Jersey are taken the following brief descriptions of two schools, the former claiming a junior high school, the latter denying one:

Bloomfield: Eighth-grade pupils preparing for academic high-school courses take algebra and either Latin or French. Pupils preparing for the commercial course in the high school and those who do not expect to enter high school take in the eighth-grade bookkeeping and a larger amount of industrial work (domestic science for girls and shop-work for boys) than do the other pupils. In other subjects the work is uniform for all pupils.

Englewood: All seventh- and eighth-grade pupils are brought together in an intermediate school. Pupils are divided into four groups, each characterized by an elective subject or group of subjects as follows:

Group A — Latin or French.

Group B — Typewriting and extra English.

Group C — Drawing and Household Arts.

Group D — Mechanical Drawing and Printing.

Each of the elective subjects or group of subjects occupies four hours a week. The mathematics of Grade 8 A for Group A is arithmetic and algebra; for Group B, Commercial Arithmetic and the elements of bookkeeping; for Groups C and D, practical applications of arithmetic and accounts. In other subjects the work is identical for all four groups. A different emphasis is, however, given to the English work of Group A from that of the other three groups.

Following the entry of the United States into the World War there was a slowing-down of all normal progressive movements in education, the schools devoting themselves to routine work and without stint to the tasks assigned them by the Government and its auxiliary agencies. All building programs were held in abeyance and the reorganization of schools almost entirely stopped. But all the time plans

were being made; and after the armistice the establishing of junior high schools began again in earnest, especially in the larger cities.

In Table VII is presented the number of junior high schools reported in the several States up to March, 1917, with data returned for this study as to the number claiming reorganization, filling out questionnaires, and not replying. There is also included the distribution of 293 junior high schools reporting in 1918 to Davis from the seventeen States in the territory of the North Central Association of Colleges and Secondary Schools. The differences between the two returns will emphasize the difficulty of ascertaining the number of schools that have at any time been reorganized.

Up to the spring of 1917, 800 junior high schools had been reported; of these 292 filled and returned questionnaires, and 85 more claimed to be junior high schools, but made no detailed returns of data. In all, then, there were 377 schools that claimed to have effected reorganization. To this total there should, of course, be added such schools as were mentioned above (pages 57-59), and a number, on doubt, from those that were listed, but made no reply to one or more inquiries. With the estimated increase since 1917 it is probably well within the facts to say that there are to-day upwards of eight hundred junior high schools in the United States. The only section of the country that has been unresponsive to the movement is the South, from North Carolina to Louisiana, and a few States in the Far West. So rapid a growth of a new educational institution or of a marked modification in an old one is unparalleled in our history.

The profession by so large a number of principals and

TABLE VII

SHOWING THE NUMBER OF JUNIOR HIGH SCHOOLS REPORTED,
CLAIMED, RETURNING QUESTIONNAIRES, AND DENYING REORGANIZATION

States	Number of junior high schools reported in 1917	Number claiming reorganization	Number returning questionnaires	Number denying reorganization	Number reporting to Davis in 1918
Alabama.....	2	..	..	..	..
Arizona.....	3	..	..	..	3
Arkansas	8	4	3	1	..
California.....	51	31	25	9	..
Colorado.....	11	6	5	1	9
Connecticut.....	7	4	4	1	..
Delaware.....	0	..	..	..	..
Florida.....	3	..	..	..	..
Georgia.....	4	..	..	..	..
Idaho.....	10	3	3	2	..
Illinois.....	29	10	10	4	15
Indiana.....	46	21	20	11	33
Iowa.....	40	8	8	11	16
Kansas.....	29	9	7	8	28
Kentucky.....	7	4	3	1	..
Louisiana.....	1	..	..	..	..
Maine.....	6	3	3	2	..
Maryland.....	3	..	..	2	..
Massachusetts.....	79	47	22	14	..
Michigan.....	30	16	12	4	43
Minnesota.....	34	22	15	2	32
Mississippi.....	2	..	..	..	..
Missouri.....	21	5	4	3	4
Montana.....	4	1	1	2	..
Nebraska.....	17	12	8	1	26
Nevada.....	0	..	..	..	..
New Hampshire..	16	14	12	1	..
New Jersey.....	14	6	6	5	..
New Mexico.....	0	..	..	..	3
New York.....	47	28	14	3	..
North Carolina...	3	..	..	1	..
North Dakota....	29	10	10	7	17
Ohio.....	34	22	21	3	29

TABLE VII (*continued*)

States	Number of junior high schools reported in 1917	Number claiming reorganization	Number returning questionnaires	Number denying reorganization	Number reporting to Davis in 1918
Oklahoma.....	25	8	7	2	8
Oregon.....	13	11	10	..	..
Pennsylvania.....	34	14	9	8	..
Rhode Island.....	6	1	1	3	..
South Carolina.....	1	..	..	..	..
South Dakota.....	13	3	1	6	7
Tennessee.....	8	2	2	1	..
Texas.....	10	4	3	4	..
Utah.....	31	16	12	..	..
Vermont.....	17	12	12	4	..
Virginia.....	6	4	4	1	..
Washington.....	6	4	4	1	..
West Virginia.....	7	3	3	2	..
Wisconsin.....	17	6	6	3	17
Wyoming.....	7	3	2	1	3
Totals.....	791	377	292	135	293

superintendents that they have reorganized their schools is important as indicating a change in conceptions of American secondary education; and even when the actual changes are small, it is of importance as revealing the dissatisfaction with existing organization, subject-matter, and methods, and a perception of an ideal that is better. That this dissatisfaction exists and that the ideal is often dim invite leadership to direct the spirit into concrete realization.

Junior high schools, so far as reported, ranged in size from 23 to 2465 pupils. The 259 that gave the total enrollment for 1916-17 had the distribution shown in Table VIII.

TABLE VIII

SHOWING THE DISTRIBUTION OF ENROLLMENTS OF 259 JUNIOR HIGH SCHOOLS OF ALL COMBINATIONS OF GRADES

Size	Number	Size	Number
10-100	57	801- 900	4
101-200	61	901-1000	5
201-300	38	1001-1100	1
301-400	32	1101-1200	2
401-500	23	1201-1300	4
501-600	14	1301-1400	0
601-700	7	1401-1500	1
701-800	9	2001-2500	1
Median — 232 pupils			

Inasmuch as these 259 schools had almost all combinations of grades (7-9, 7-8, 6-8, etc.) another distribution is shown in Table IX of the 157 schools having grades 7-8-9.

TABLE IX

SHOWING THE DISTRIBUTION OF ENROLLMENTS OF 167 JUNIOR HIGH SCHOOLS OF GRADES 7, 8, AND 9

Size	Number	Size	Number
23- 25	1	501- 600	10
26- 50	9	601- 700	15
51- 75	12	701- 800	8
76-100	11	801- 900	4
101-150	19	901-1000	4
151-200	15	1001-1100	2
201-250	12	1101-1200	1
251-300	11	1201-1300	2
301-400	14	1501-1600	1
401-500	15	2465	1
Median — 248			
First Quartile — 116			
Third Quartile — 496			

The median enrollment of these 167 schools was 248 pupils. Three fourths of them had more than 116 pupils, and one fourth had more than 496. If we assume that there were 500 junior high schools in 1917 and that these 167

were typical as to size, we can estimate the total number of pupils as approximately 125,000. The average number of pupils in 259 schools having grades 7-8 or 7-8-9 was 218, as compared with an average of 168 for the 293 schools listed by Davis in the North Central territory.

Distributing the pupils by grades, we find that there were 20,916 in the seventh; 19,711 in the eighth; and 16,026 in the ninth. The averages are 133.2, 125.5, and 112.1 for the respective grades. One cannot estimate from these figures the holding power of the junior high schools, for not only is the number of entering pupils growing each year, but many schools for one reason or another transfer pupils to or from the junior high school in the eighth or ninth grade.

For the schools reporting, the average percentage of boys to the total enrollment in the seventh, eighth, and ninth grades respectively was 48.7, 48.4, and 46.6. Fifty per cent of the schools had in the seventh grade a range of 45.5 to 52.7 per cent of boys; in the eighth, a range of 44.5 to 51.9; and in the ninth, a range of 41.9 to 51.2. Davis found the percentage of boys among 21,658 pupils in the North Central territory to be 43.9.

CHAPTER III

CLAIMS AND OBJECTIONS

A. CLAIMS FOR THE JUNIOR HIGH SCHOOL

THE claims which have in various places been made for the junior high school are numerous and attractive. When a critic realizes, however, that they are based on several different conceptions, he is prepared for disappointment as to the achievements by any single school, and he is led to consider the claims as an expression of educational ideals. In so far as the function implied by each claim is worth the expenditure that it will require of invention, effort, and money, it is likely to influence the future development of intermediate schools. Generally speaking, the claims are a reversal of the criticisms made of the eight-four organization; but for convenience it has been thought wise to collect, organize, and present all the major claims that have been made.

When collated, the claims seem to be (I) that the new organization will bring about certain administrative advantages; (II) that it will produce better curricula and courses of study; (III) that it will find or develop better teachers and therefore secure better teaching; (IV) that it will provide more fittingly for the needs of pupils due to individual differences; and (V) that these provisions will in turn retain pupils longer in school, facilitate their transition to higher schools, save time for them, and result in a more effective training in character.

These claims will now be presented in more detail, each followed by brief comment.

Claim I. The junior high school will make possible certain administrative advantages. These are:

- a. Classes of approximately normal size;
- b. A more nearly complete use of the school plant;
- c. The full use, for at least a day at a time in one building, of special teachers and supervisors, thus preventing the loss due to traveling from one school to another;
- d. The offering of differentiated curricula;
- e. Departmental teaching;
- f. Promotion by subject.

It is obvious that the details of this general claim apply only to a centralized school containing enough pupils to make one or more full-sized classes for each half-year grade. Reference to page 8 will show how a centralized school would make possible all of the six details; but sometimes, as in Kalamazoo, the establishing of junior high schools does not necessarily result in the congregation, even in a city of considerable size, of enough pupils to make the enumerated details economical. The desirability of the first three details is assumed; that of the last three is discussed elsewhere.¹

If pupils are distributed according to the data given for 1916-17² there will be approximately the number for each grade in junior high schools of various sizes as shown in Table X.

¹ See pages 127 ff., 139 ff., 155 ff.

² *Report of United States Commissioner of Education* for 1917, vol. II, p. 24.

TABLE X

SHOWING DISTRIBUTION OF PUPILS IN GRADES 7, 8, 9 FOR JUNIOR HIGH SCHOOLS OF VARIOUS SIZES

Grades	Total enrollment	Number of pupils in each grade	Approximate number of classes of 35 pupils
7	303	132	4
8		111	3
9		60	2
			— 9
7	500	220	6
8		185	5
9		95	3
			— 14
7	700	308	9
8		259	7
9		133	4
			— 20
7	1200	528	15
8		444	13
9		228	6
			— 34
7	1500	660	19
8		555	16
9		285	8
			— 43

While the distribution will vary widely with the locality, one may estimate roughly from this table the number of classes that may at the beginning be expected in each grade.

If the junior high school increases the per cent of retention, as it is said to do, of course the numbers in the upper grades will be larger.

Claim II. The junior high school will make easier desired reforms in curricula, courses of study, and extra-curricula activities.

To an extent this claim is undoubtedly true, for it is characteristic of human nature to defer several desired changes until they may all be attempted together. Just as moving to a new house often gives the necessary stimulus for the purchase of some long-needed article of furniture and the rearrangement of old ones, so the administrative change to a new type of organization facilitates the remaking of educational offerings. There is frequent testimony that parents, teachers, and pupils have accepted as a matter of course in junior high schools changes which because of protests had to be abandoned when attempted in the grammar grades.

Although desired reforms are by the new organization made easier, it does not at all follow that they will automatically or inevitably result. Until the purposes of a junior high school are clearly and definitely formulated, changes of curricula, if made at all, will be of uncertain value, courses of study will continue much as in the past, and extra-curricula activities will be more or less fortuitous. But although there are several contending purposes for the new type of school, many evidences of modified subject-matter are seen; the junior high school is unquestionably facilitating reform in this field. Fortunately it is proving as effective in the small town or rural district as in the cities.

Claim III. The junior high school will find or develop better teachers and therefore secure better teaching.

There is no inherent reason why this claim should be justified; but in practice it for several reasons usually is. There is a clearly recognized ambition among teachers to prefer teaching higher grades of work — an ambition that has been fostered by the practice in many places of paying larger salaries as the work advances and by an augmented social recognition for advanced teaching. As the salary of junior high schools is generally somewhat above that of the grammar grades, superintendents have seized the opportunity to reward by promotion unusually skilled and ambitious teachers in the grades. The salary, the prestige of the name "high school" even with "junior" prefixed, and the demands of industrial subjects, too, have resulted in an increased number of men teachers for early adolescents. This result tends to satisfy those who believe that children at this age should come under the influences of teachers of both sexes.

Again, novelty of organization facilitates the introduction of new and better types of teaching; teachers are more willing to attempt in the junior high schools methods which supported by convincing theory are difficult in older organizations because of other traditions. Observation of a number of junior high schools shows a spirit of receptivity to new methods that is most encouraging. Results in both small and large schools will depend, of course, on the clearness with which methods suited to definite purposes are conceived and presented to the teachers and on the consistency of skillful supervision.

Claim IV. The junior high school will provide better for the needs of pupils due to individual differences:

- a.* Of ability;
- b.* Of prospective career:
 - 1. educational,
 - 2. vocational;
- c.* Of sex.

This claim is based on a recognition of widespread individual differences of ability and on an assumption that at this age some work differentiated in kind or in amount should be offered because of these differences in ability, prospective career, and sex. As already shown, there is some objection to curricula in the junior high school differentiated on the basis of future career; differentiation on the basis of ability and sex is more generally approved, though seldom provided. To make any differentiation possible, it is necessary to have enough pupils congregated to fill two or more classes for each grade; to make it profitable, there must again be definiteness of purpose, a more or less reformulated program for organization, subject-matter, and methods of teaching, and teachers who are both sympathetic with the plan and able. Individual differences in early adolescents are to an extent being provided for in other types of schools; but as the junior high school has been established largely because of a recognition of such differences and of their several demands, it probably concentrates more of its efforts on making satisfactory provisions than other types do. Certainly it so far has no traditions to make such provisions difficult.

Claim V. The junior high school will, by its various provisions,

- (a) increase the persistence of pupils in school;
- (b) facilitate the transition of pupils to higher schools
 - (1) by destroying the sharp break between elementary and secondary education;
 - (2) by removing the change to a higher school from the period at which the age of compulsory education for most pupils terminates, and
 - (3) by a saving of time for all pupils;
- (c) better develop the character of individual pupils.

The validity of this claim depends, of course, on the extent to which the junior high school has provided adequate machinery for achieving the other claims made for it. If it has so reformed its organization that the government and atmosphere are congenial to early adolescents, and the content of its courses and methods of teaching so that both pupils and parents are convinced of the worth of its instruction, there is every reason to expect an improvement in persistence. It has recently been shown¹ that inability to do high-school work is not the primary cause of elimination. Certainly an institution which pupils enter before the law permits them to go to work and which offers no convenient stopping-point until the subjects of secondary education have been explored and have had a chance to make their appeal, an institution which provides in several ways for individual differences, and which affords attractive and profitable extra-curricula activities, is likely to hold pupils longer than one that does none of these things.

If the junior high school has provided a gradual transi-

¹ O'Brien: *A Study of High-School Failures*. Teachers College Contributions to Education, No. 102.

tion in subject-matter, in types of teaching, and in general atmosphere, and if by exploration and guidance it furnishes information concerning advanced work and its worth, it is likely to facilitate transfer to higher schools. The saving of time depends to a large extent on the conception adopted for the school and on the homogeneous grouping of pupils of superior ability with encouragement for them to proceed as fast as they may with profit. If by any means pupils are retained longer, the school has greater opportunity by all its resources to develop the character of each individual. It is asserted that more can be done toward achieving this end by extra-curricula than by any other activities.

The details of this general claim must ultimately be judged by results; thus far, established junior high schools are too various and on the whole too young to furnish convincing data. Theoretically the claim should be measurably substantiated in schools both small and large.

B. OBJECTIONS TO THE JUNIOR HIGH SCHOOL

It is not surprising that proposals for so radical a change in an established system as that of introducing an intermediate school should result in many objections, especially since the new institution has been variously conceived and since it has often been extravagantly advocated as a sure cure for all educational ills. The wonder is that objections should have been so little urged. Perhaps sharper and more insistent criticism would have effected greater definiteness in planning and more material changes in organization.

For this report a summary of all objections was made, based on a comprehensive review of educational magazines,

on notes recorded after many visits and conversations, and on reports from numerous correspondents. It is not thought necessary, however, to present with comment such an expression of judgment as that "the arguments for a junior high school are unconvincing," such an expression of dim vision as that "the results of reorganization are not likely to be worth the fight against the induration of the public and schoolmen alike," such indefinite statements as that "six years for secondary education seems too long," or such details as are not peculiar to the new type of school. The other objections are given with brief explanation and comment, facts regarding practice being reserved for later chapters.

Objection I. The junior-high-school program is indefinite.

For schools by and large this objection must be immediately admitted. The claims set forth have shown great enthusiasm as educators have glimpsed the possibility of breaking from tradition and of trying-out their ideas of what ought to be; but these visions have frequently concerned only phases of the problem and too often have directly contradicted each other, not only in details, but also in fundamental principles. Perhaps it is only by multifarious "groping, testing, passing on" that we may expect advance. But certainly to make any advance economically it is necessary to prepare beforehand a definite program soundly based on clearly formulated principles.

Objection II. Criticisms are for the most part of defects that can be remedied in the present organization.

This objection, too, must be generally admitted. There are few, if any, details in all the junior high schools that

may not be found somewhere in the most progressive elementary schools. But there can be little question that as a class the junior high schools are showing more activity in seeking changes than are the conventional schools, and that when progressive they are likely to attempt more of the reforms that are recognized as desirable. Those who for any reason object to the junior high school have one sure means of preventing its establishment — that is, by introducing into the common system the features the promise of which has given impetus and popularity to the movement for reorganization. In further rebuttal of this objection it is argued that the change in administrative unit makes other changes easier. The testimony on this point is so strong as to be convincing. As neither teachers nor parents have any traditions regarding the junior high school, they accept with a minimum of protest details of any reasonable program.

The remaining objections may be grouped under three heads: objections certain to be remedied in time; objections in part or wholly remediable by good administration; and objections to fundamental matters. The following five objections concern conditions that are likely to be remedied in time.

Objection III. State laws make the establishment of junior high schools difficult if not impossible.

In a number of States laws that were formulated when the ideal was an eight-year elementary school followed by four years of a high school very naturally make difficult any material modification of the educational program. These laws concern the definition of schools, the distribution of school

funds, uniform curricula or courses of study, uniform textbooks, the certification of teachers, required records and reports, and compulsory attendance.

The definition of elementary schools or of high schools is frequently important because of statutes referring to the institutions defined and because of the restrictions on practice sometimes contained in the definition. The Indiana Revised Statutes,¹ for example, declare that

the elementary schools shall include the first eight (8) years of school work, and the course of study for such years which is now prescribed or may hereafter be prescribed by law. The commissioned high schools shall include not less than four (4) years' work following the eight years in the elementary school.

Despite this statute, however, there are in Indiana several well-developed junior high schools. In California likewise a number of progressive junior high schools developed under the handicap of the law, which was amended in 1915 as follows:²

The high-school board of any high-school district or the trustees of any high school may prescribe intermediate-school courses and admit thereto pupils who have completed the sixth year of the elementary school. . . . The first two years of the intermediate-school course shall include instruction in the school studies generally taught in the seventh and eighth grades of the elementary schools, and may include such other studies including secondary, vocational, and industrial subjects, as said high-school board may prescribe.

In Vermont, too, in order that the program recommended by the educational survey might be adopted, the legislature in 1915³ passed amendments to the State school laws per-

¹ Section 6583. ² Section 1750. ³ Vermont School Laws, 1915, p. 39.

mitting the State Board of Education, "with the approval of the school directors in the towns concerned," to divide secondary schools into two classes: (a) junior high schools, having a four-year course, grades 7 to 10, and (b) senior high schools, having a six-year course, grades 7 to 12. The courses are to be

flexible in character, designed for the instruction of pupils who have completed an elementary course of not less than six years, and suitable to the number and needs of local pupils; and the State Board of Education shall arrange for a course of study, including vocational opportunities appropriate to the needs of pupils in the several communities. In any town where a junior high school is established the State Board of Education shall make the necessary readjustment of the course of study in the elementary school.

As an illustration of the obstacles impeding the establishment of junior high schools, the old law in New Jersey may be cited. Under it municipalities received from the State \$200 for each elementary teacher employed and \$400 for each high-school teacher providing that he taught no class below the ninth grade. Thus a municipality would lose one half the apportionment by the State for each high-school licentiate who taught any class in grade seven or eight and would gain nothing for each lower-school teacher who gave instruction to the ninth grade. The law was amended in 1916 so that certain cities would receive from the State \$315 for each junior-high-school teacher.

In States which prescribe by statute the subjects that may be taught in the first eight grades and which support the curriculum by the adoption of textbooks for uniform use in every school, reform in the intermediate grades would seem to be impossible. But there are numerous instances

of the development in such States of junior high schools, either because some flaw was found in the statutes or because an evasion was approved or permitted by the authorities. Laws designed for different conditions frequently prescribe separate examinations for license to teach in the first eight grades and in the high school; and the superior license does not include the other. This situation creates a real obstacle, but not an insuperable one, since a teacher ambitious to teach in a three-year junior high school may take both examinations. The laws requiring uniform records and reports also place added labor on junior-high-school administrators.

The Minnesota law provides for releasing from school attendance children who are fourteen years of age if they have completed the common branches, or the eighth grade.

The proposed plan of regrouping . . . would make this provision of the law a misfit. If it is to serve a useful end, the law should be so changed as to encourage its completion by all pupils under sixteen years of age.¹

Other laws concerning this compulsory attendance, as in Ohio and New York, are similarly based on the old organization of an eight-year elementary school. But there is no reason to believe that the States will long hesitate to make any such changes in their laws as a convincing program for educational advance may necessitate.

Objection IV. There is a lack of suitable text-books.

This objection is still valid, though publishers are now producing a number of texts especially designed for junior high-school use. Whether they prove suitable or not will

¹ Bulletin 39, Minnesota State Department of Education.

appear only after they are given extended trial. Like the texts prepared for other schools, they reflect the personal opinions of individual authors as to what should be taught, opinions modified by what seems to be the demand of the schools. It is unfortunate that there do not exist clearly formulated criteria for judging texts, for they probably do more, the country over, to influence educational practice than does any other one factor. The lack of texts is being remedied; whether the new books will be suitable or not depends to a large extent on the ability of their authors to recognize fundamental purposes of the junior high school and their willingness to follow declared purposes even to the extent of breaking with tradition. Several of the books prepared for junior high schools manifest many novel and commendable features, showing far more independence than do similar texts for the traditional senior high school.

Objection V. There is a lack of suitable teachers.

If this objection means that there is an insufficient supply of teachers fully informed of the purposes of the junior high school and adequately trained sympathetically to carry out those purposes in practice, it must unquestionably be sustained. But as is pointed out elsewhere, superintendents are very generally rewarding their successful and ambitious teachers by placing them in the junior high school, frequently with an increase of salary or with more agreeable conditions for work. Whether or not these teachers and the younger ones who have sought special training for their tasks in normal schools and colleges become satisfactory depends very largely on the clearness with which their principal perceives the purposes of the schools and the

assiduity with which by supervision he modifies their practice to secure the desired ends.

Objection VI. There is a lack of proper buildings and equipment.

What a proper building and equipment are for a junior high school will be determined very largely by the educational purpose for which it is established. If the school is to differ materially from the higher elementary school, it is not likely to find ready and open for occupancy an equipped building suitable for its work. The attractiveness of its program is quite as likely, as the popular conception of a city's financial status, to determine whether or not such a building can be secured. Facts as to buildings and grounds actually in use will be presented in chapter xi. It is pertinent to commend here the program followed at Beverly, Massachusetts, where the superintendent, in conference with the State Department of Education, first formulated the curricula for the junior high school and then had drawn plans for an adequate building in which to present the necessary courses. This seems such a reasonable procedure that one wonders that it is not universal. But in order to secure some educational progress, many compromises have been made the country over as to mechanical matters. The generosity of the public in providing high-school buildings and equipment during the past two decades does not make this objection promise to be insuperable.

Objection VII. There is much opposition from elementary-school principals and teachers who feel slighted by not being taken into the junior high school.

The extent to which this objection is true is difficult to ascertain, for it is not as a rule openly given as the cause for opposition. But it has had its effect, nevertheless, in subtly blocking numerous programs for reorganization. Although it is only human for one to feel a keen sting at not being chosen for some coveted post, the criterion in every case should be the interests of the pupils and the public rather than the feelings of some teachers and principals. To offset such feeling as may result, feeling that must by the very nature of things be temporary, is the stimulus given to those who, because of ambition, ability, and industry, are chosen to conduct the experiment. Du Shane points out that there will remain yeoman work to do in the abbreviated elementary school, especially in the last three grades, partly because the lower school will need material modification in fully performing its work, and partly because grades 4 to 6

have not been adequately organized in times past. The teachers in these grades have been the new and inexperienced teachers of the system, as contrasted with the primary teachers on the one hand and the upper-grade teachers on the other. Non-promotions have been high. Drill has been regarded as the chief function of the grades, while the heavy withdrawal of pupils has given clear evidence that the pupils need something that is vital and attractive. Let elementary principals attack these problems and they will not miss the seventh and eighth grades.

The two following objections, in so far as they are valid, are wholly or in part remediable by good administration.

Objection VIII. Departmental teaching is bad for pupils of the immaturity found in junior high schools.

Here a real issue is joined. The arguments for and against departmental teaching are numerous, but unfortunately

there are few or no data as to results that warrant an absolute answer concerning its value. That the judgment of schoolmen is strongly in its favor is evidenced by its all but universal use in high schools and by its extension downward into the lower grades. There is so much variation in opinion as to when and to what extent it should be introduced that he is a rash person who ventures a dogmatic judgment. The arguments for and against departmental teaching are presented in chapter v, section A. A careful examination of this display will show that the arguments are of very uneven value, that they do not always join issue, that too frequently they rest upon assumptions unproved and perhaps not completely considered, and that unfortunately they are for the most part expressions of judgment based on wide but very varied experiences.

If junior high schools are to "bridge the gap" between the elementary and the secondary school, it would seem reasonable that they should use among other practices a modified form of departmental teaching, introducing it gradually from the seventh grade onward. So far as the arguments are sound that the change from a single teacher in the elementary school to several in the high school is demoralizing, it would seem even stronger still against the sudden change two years earlier. Testimony that no such demoralization exists when a sudden change is made in the seventh grade is frequent, but it is not convincing. Certainly any system of departmental or even of semi-departmental organization that is not supplemented by a carefully planned advisory system is likely to earn the objections that the individual pupil is inadequately looked after, di-

rected, and encouraged. On considering the question of departmental teaching one should constantly inquire which of the claims are likely to be justified under reasonably good administration. Both departmental and non-departmental teaching need skillful and continued supervision.

Objection IX. The junior high school will cause two gaps in the school system instead of one.

So far as this objection is valid it argues for a unified twelve-year system. For many reasons the country has very generally approved as ideal the separation of secondary-school pupils from those younger; therefore the arguments pertaining to a continuous twelve-year school are not considered here. The objection overlooks two very essential facts: first, that even in the most radical proposals for junior high schools there is no such sharp change in organization, in subject-matter, in discipline, and in atmosphere as there usually is at the beginning of the four-year high school; and, second, that even if there were, the compulsory-attendance law would hold most children over this first period of possible "break" and see them fairly introduced to the transitional school.

The final group of objections, four in number, are the most important of all, since they attack some of the fundamental principles and programs of the junior high school.

Objection X. The segregation of pupils of early adolescence is undesirable.

This objection, so far as it concerns segregation from the younger pupils, is well voiced by Joseph S. Taylor, District Superintendent of the City of New York:¹

¹ *New York Globe and Commercial Advertiser*, February 15, 1918.

We find it very desirable to have the older children associate with the younger. In their play and in the family the younger imitate the older, and thus obtain a considerable part of their natural education from playmates who lead in games and sports. In school they also get inspiration from contact with their more advanced associates, and desire to know and do what older folks know and do. The older children, too, profit by this arrangement. They develop a sense of responsibility and coöperation by having to look out for the little ones, by answering their questions, and by helping them in their lessons and play. The work of the older pupils may be used in teaching the lower grades. Maps, charts, diagrams for the study of history, geography, and nature are made by older pupils for use by the younger. Children in the last two years may read to children of the first two.

Taylor favors a nine-year school preceding secondary education, and so does not push the argument logically forward, as does Superintendent Wirt, of Gary, to demand that pupils of all ages, from the kindergarten to the end of public schooling, should be in one building. Of course the twelve-year school is common in small school districts, but it is significant that in a preponderating majority of the districts large enough to afford it, the secondary school is a separate institution; and even when housed in the same building with elementary grades it is usually a separate organization, the pupils mingling seldom by intention of the authorities.

The assumption by advocates of separately organized junior high schools, an assumption generally approved by them after experience, is that the more homogeneous a group of pupils in age, interests, and social maturity, the better the teaching and the easier the discipline. They feel that it is especially desirable that early adolescents, who are neither children nor youth, should be segregated in order that adequate provision may be made for their peculi-

arities of disposition. It is argued, too, that the influence of early adolescents on small children is frequently bad, and that if kept by themselves during the transition to youth they will be less influenced to imitate the undesirable traits of older pupils. Whether early adolescents are segregated or not in a separate building, a junior-high-school program in its other details may be prepared and administered for them.

Objection XI. The junior high school will cost more.

It can easily be shown that if no increased educational opportunities are offered when a junior high school is established and if the salaries of the teachers are not increased, the cost per pupil will be reduced rather than increased. But if provisions be adequately made for desired improvements in the education of early adolescents, the objection will doubtless be soundly based on fact. There is seldom in education, any more than elsewhere, a possibility of getting something for nothing. If a public primarily desires to save money, there is no simpler program for doing so than closing the secondary schools entirely. Whether or not the sharp increase in per capita cost for the high school over that of the grammar grades is better than a more gradual increase proportioned to the widening educational offering is a matter of opinion. The fact is that the junior high school generally increases the monetary outlay for education;¹ this increase can be justified only by a corresponding improvement in the educational opportunities offered, or by an increase in the number of pupils retained through the ninth grade.

Objection XII. Differentiated curricula should not be offered until pupils have completed eight years of work acquiring the tools of education.

¹ See chapter xii.

This matter has been extensively considered in the preceding chapters. It is obvious that in the absence of clearly formulated statements of minimum "tools of education," and with the great variation by different schools in equipment, length of term, trained teachers, and the like, an insistence on eight years as the length of common training is more or less meaningless. Common tools are for common use; and, as much of life is differentiated, some part of training should be differentiated too. Because of the large number of withdrawals from school at or about the age of fourteen, differentiation must be begun before that time or it will fail to profit many who perhaps need it most. Junior-high-school advocates very generally urge a gradual differentiation, often not beginning until the eighth grade; and one of the contending programs proposes that one or more years of this intermediate school be given over to common courses exploratory in their nature so as to insure the wisest election possible when optional courses are offered. The whole problem, because highly complex and important, is deserving of much more consideration than has been accorded it.

Objection XIII. The junior high school may make against democracy.

This objection, which was first voiced by Bagley,¹ has been raised to its due prominence by the programs of some junior high schools and by the clarification of national ideals during the World War. While admitting that "the advantages are clearly on the side of the six-six organization from the point of view of administrative expediency

¹ *School and Home Education*, vol. 34, pp. 3-5.

and to a large extent from the standpoint of educational theory," Bagley doubted the wisdom of early differentiation in that the children may fail to get "a common basis of certain ideas and ideals and standards which go a long way toward insuring social similarity — a basis of common feeling and common thought and common aspiration which is absolutely essential to an effective democracy." "Stratified society," he continued, "may encourage the development of social groups that cannot understand one another because they lack a common basis of knowledge, ideal, and aspiration"; therefore he pleaded for constants in the curriculum — constants, it is reasonably assumed, such as will assuredly make for social integration.

This clear-sighted vision of the possibilities of early and complete differentiation is stated in another form by Taylor: ¹

The permanent segregation of children twelve years of age into liberal and industrial groups is a species of social predestination which is well suited to an autocratic government like that of Germany — where the class system is deliberately cultivated — but which is wholly unsuited to a democracy like ours. This objection is eloquently voiced by Professor Dewey in his *Schools of To-Morrow*, and is epitomized in the following quotation from a recent address of his:

"Instead of trying to split schools into two kinds — one of a trade type for children who, it is assumed, are to be employees, and one of a liberal type for children of the well to do — it will aim at such a reorganization of existing schools as will give all pupils a genuine respect for useful work, ability to render service, and contempt for social parasites, whether they be called tramps or leaders of society."

¹ *New York Globe and Commercial Advertiser*, February 15, 1918.

Because of his careful statement of the possibilities of danger, Bagley has erroneously been often cited as opposed to the whole junior-high-school movement. To prevent there being a misconception resulting in an obstacle to generally desired educational reform, Bagley collaborated with Judd, a leading advocate of the junior high school, in a statement¹ that is not likely to give comfort to reactionaries opposed to any material change in our educational progress. Following is a brief summary of the article, which should be read in its entirety:

- I. "The first principle . . . is that all organization within the schools should be judged as appropriate to the American system of education just in the degree in which it makes for continuous and uninterrupted opportunity for every pupil."
- II. The second general principle is that there should be a larger measure of enrichment of the course of study and of the opportunity offered to the pupil, affecting especially grades 7-9.

In this connection the fact should not be overlooked "that the enrichment of a course of study often consists in that internal reorganization which forces instruction from unproductive by-paths. . . . This internal readjustment is quite as important as importation into the course of new material. . . . The enriched program must have one characteristic above all others. It must be appropriate to a democracy."

a. Three positive statements.

1. "The future must see greater emphasis than has the past on studies of community life and community needs," the term "community" not being narrowly defined.
2. The enriched course must provide "a broad, sure foundation for the practical life of the individual," but "no narrow limitation of the individual, no training for a single type of life. This is not a plea

¹ "Enlarging the American Elementary School," *School Review*, vol. 26, pp. 313-23.

for narrow trade training; it is rather that there must be a vigorous effort toward the development of a comprehensive view of industry, so that the individual may choose his career after a broad view of democratic opportunity."

3. "The enrichment of the course must aim consciously at the destruction of those provincialisms and class prejudices which have worked in the history of nations in the past, counter to the interests of democracy."

b. Two negative statements.

1. "A course of study (curriculum?) is not broad and enriched in the sense in which the term 'enrichment' is used in this article if it is a limited course preparing for a trade. . . . Whenever trade training is given it should be accompanied just as far as possible by broadening, sympathy-cultivating instruction."
2. "There are certain forms of enlargement of the course of study which defeat rather than promote the ends of education." They are the introduction of more subjects than the pupils can assimilate and the introduction of courses "which are in form far beyond the maturity of the pupils."

III. The third general principle is that provision should be made for "the wide differences among pupils with respect to tastes, abilities, and capacities for progress."

"If the elementary course is so safeguarded that its content of instruction shall give to all children some common central body of ideas, differentiation must be introduced cautiously and with full regard to the requirement that universal instruction be given in fundamentals. It is not incompatible with this demand that individual differences be recognized to some extent from the very outset of school life, although the general principle of individual differences begins to assert itself as an important basis of educational organization in the middle grades of the school." Especially should provision be made for differences in rate of progress and in richness of courses because of differences in the intellectual ability of pupils.

The authors conclude, "Our school system should be in every sense a 'unit' system. It should reflect at every point the two fundamental and complementary principles of democracy — opportunity and obligation, opportunity for individual development, coupled with and paralleled by the obligation of the individual willingly to learn the lessons that all must learn in common if our democracy is to rest on a real community of ideas and ideals."

This statement should go far toward clarifying the issue and stimulating schoolmen to attempt, either in the old organization or in the new, the internal reform of subject-matter, which is of vastly more importance than the administrative unit in which it is presented. There is very likely to be almost unanimous approval of the principles set forth by Bagley and Judd as an ideal toward which all in America should work; in practice, however, there will assuredly arise differences as schools seek to satisfy the demands of the nation and the needs, both immediate and remote, of pupils. These differences in practice will arise partly because the elementary schools, by varying tremendously in their effectiveness, will secure the desired community of interests and ideals at different periods of pupils' advancement, and partly because there is no agreement as to the definite amount of common training that is adequate. As Bagley and Judd themselves say, "How soon the school should recognize this fact," that as the child matures he differs increasingly from his neighbor, "and begin to offer diversified opportunities . . . has been an unsolved problem."

Even in the junior high schools that offer in the seventh grade the most markedly differentiated curricula there is still retained for all pupils a large amount of subject-matter

that has been and is given in undifferentiating schools. Whether this is adequate or not is a matter of opinion. In this discussion it should never be assumed that merely because subject-matter is common, it will therefore as a matter of course lead to a desirable integration. Even in the grades before differentiation has begun, the subject-matter must be intelligently chosen to achieve the end in view. It may be cogently argued that in all years of the secondary school, pupils who have elected different curricula should for the purposes of a social democracy mingle in classes that present material of common interests and needs and participate together in extra-curricula activities.

It seems, in conclusion, that admitting this objection as valid against any schools that may attempt to make early and irrevocable classification of pupils, nearly every one approves as ideal a unified elementary course of a length determined by the necessity of securing democratic integration, and a subsequent intermediate course of exploration that will gradually lead to diversified curricula. Probably exception must under present conditions be made for the pupil who for one reason or another will not remain in school beyond the age of compulsory education. Compromise and adjustment will result for him as for any other variation from a social, physical, or psychical norm. To secure the ideal in practice, then, every form of organization must work primarily by means of internal reform to make education a continuous process onward as long as it is profitable and possible for any individual pupil to remain in school.

A plea for the over-aged and retarded pupil is made by

Principal Cox of the Blewett Junior High School, of St. Louis.¹ He contends, first, for the admission to the junior high school of all mentally normal pupils, whatever their academic progress, one year before they reach the limit of compulsory schooling, since "it cannot be of maximum help to children who never reach it"; and, second, that

it must make its instructional program so worth-while that these pupils will remain in school; to deny vocational preparation to fourteen-, fifteen-, and sixteen-year-old children is undemocratic and inefficient in the extreme. For over-age children [he continues] do leave school in the 7th, 8th, and 9th grades in disconcerting numbers. Offering honest vocational preparation keeps many of them in school, where the organization, the teachers, and at least a part of the curriculum are powerful influences to preserve and increase socially valuable characteristics and resources of these boys and girls "who don't like books." . . . One must face the actual situation, and then this academic danger of "social castes" turns out not to exist. And if it did exist, would the sensible way to meet it be to drive out of school all but the "upper caste"? No one who actually develops a democratic junior high school and follows up the pupils who drop out of school would be willing to say to his over-age pupils: "If you want special training, you can't have it here."

In a private letter Mr. Cox writes:

We try to offer educational opportunities to the slow and the over-aged so definite and immediately valuable that they and their parents will find that they cannot afford to leave school.

This general position is also held by Bonser, who states that according to the United States Census of 1910 a great majority of the workers in all the vocations but public and professional service — that is, nearly ninety-five per cent of all workers —

¹ *School Review*, vol. 26, pp. 541-44.

usually begin, and will continue to begin, wage-earning by the age of fourteen, sixteen, or eighteen years. . . . Their preparation for both wage-earning and the other activities of citizenship is seldom more than from two to four years beyond the sixth grade, and at best rarely more than six years.

These thirteen objections, it will be seen, are, like the arguments for the junior high school, of uneven pertinence and weight. They are enumerated in order that a superintendent may criticize from every point of view the program that he is formulating for the improvement of his school system. In many cases local conditions may lay on one argument an emphasis that is not felt elsewhere. Certainly it is incumbent on any one considering a material change in an existing institution to

“Image the whole, then execute the parts —
Fancy the fabric
Quite, ere you build, ere steel strike fire from quartz,
Ere mortar dab brick!”

CHAPTER IV

ORGANIZATION

A. DISTRIBUTION OF GRADES AND AFFILIATIONS

As would be expected, a great majority of the junior high schools — 242, or 88 per cent of those reporting on this topic — have been established in systems previously having eight elementary grades. It may be questioned if more than half of the small number of junior high schools reporting from the territory of seven-year elementary schools have a right to the name, for there problems of unusual difficulty exist. If in this territory the high school is to follow the conventional curricula, as it usually attempts to do, the elementary courses must either have been already cut to the quick or the work is inadequately presented to many of the pupils. In the territory of nine-year elementary schools, the problem is considerably simplified. It is well within safety to state that a majority of the junior high schools established there are reducing the public-school offering to the usual twelve years.

The number of grades included in the junior high school is still ¹ widely variable, though the tendency is strongly toward a combination of the seventh, eighth, and ninth. The distribution of grades in the 267 schools reporting may be seen from the accompanying table. Several prominent schools, though not reported here (e.g., the Bloom Junior

¹ See *Report of United States Commissioner of Education, 1914*, pp. 148-49.

TABLE XI

DISTRIBUTION OF GRADES IN 267 JUNIOR HIGH SCHOOLS

Grades	Number	Per cent
6-8	3	1.1
7	2	0.8
7-8	71	26.6
7-9	174	65.2
7-10	0	.0
8	6	2.2
8-9	8	3.0
8-10	1	0.4
9	2	0.8
<hr/>		<hr/>
Total.....	267	100.1

High School, of Cincinnati, and the Seward Park Intermediate School, New York City), have accepted the combination of grades 7-10 as most nearly ideal. It is not uncommon to find a school established with grades 7-8 or 7-9 growing until it becomes a full six-year high school; this has happened repeatedly in Vermont.

The figures in Table XI were not asked for directly in the questionnaire, but were gathered from the report made on enrollment by grades. If the ninth-grade enrollment was recorded there along with that of one or more lower grades, the ninth grade was checked as belonging to the junior high school, though it is possible that in a few cases there is a unified six-year secondary course. Davis,¹ using a different category and having more complete returns from the States included in the North Central Territory, found quite a different distribution. This is shown in Table XII.

¹ *School Review*, vol. 26, p. 326.

TABLE XII

DISTRIBUTION OF GRADES IN 292 JUNIOR HIGH SCHOOLS OF THE
NORTH CENTRAL ASSOCIATION (DAVIS)

<i>Grades</i>	<i>Number</i>	<i>Per cent</i>
6-8	22	7.5
7-8	133	45.4
7-9	89	30.4
7-12	18	6.1
8	11	3.8
8-9	8	2.7
Others	11	3.8
	<hr/>	<hr/>
Total	292	99.7

Douglass¹ gives the distribution by grades for 184 junior high schools as indicated in Table XIII.

TABLE XIII

DISTRIBUTION OF GRADES IN 184 JUNIOR HIGH SCHOOLS
(DOUGLASS)

<i>Grades</i>	<i>Number</i>	<i>Per cent</i>
5-7	1	0.5
5-8	1	0.5
6-7	1	0.5
6-8	11	6.0
6-6	10	5.4
7-8	77	41.8
7-9	64	34.8
7-10	7	3.8
8	3	1.6
8-9	8	4.3
9	1	0.5
	<hr/>	<hr/>
Total	184	99.7

¹ *Fifteenth Year-Book*, p. 88.

In all three returns it is obvious that the tendency is overwhelming to combine grades 7-8 or grades 7-9. Davis and Douglass agree very closely in the relative percentages for each of these two groups, while this study found two and a half times as many of the three-year as of the two-year type.

Unfortunately no attempt was made, by means of the questionnaire used for this study, to ascertain the number of junior high schools that are independent or that are under the direction of principals of elementary and of higher schools. Davis found,¹ however, that sixty per cent of his 293 junior high schools had principals of their own. There has not infrequently been somewhat sharp discussion as to whether this is best, principals of both elementary schools and of high schools desiring the control "so as to effect a better articulation." The wisest policy seems to be that determined by local conditions — that is, the location of schools, the ideals professed, and the character of the men or women available. Examples can easily be shown of successful and of unsuccessful control by principals who have affiliations with other schools or who are independent. Observation of schools visited warrants the statement that the tendency to select a principal from the elementary-school corps rather than from the high school is somewhat the stronger, partly because men and women of this training are eager for the advancement offered by the position, and partly because they are believed to be generally more sympathetic with the movement. Of course there must be many exceptions in both directions.

¹ *Loc. cit.*, p. 328.

B. RELATION TO ELEMENTARY SCHOOLS, INCLUDING ADMISSION

The relation of the junior high school to the first six grades depends in theory primarily on the conception of the purposes of the intermediate organization. If one of the more important purposes of the junior high school is to bridge the gap that exists between the elementary and secondary schools, then certainly it should not create another one between the sixth and seventh grades, even though the compulsory-education law holds most pupils until they pass beyond that point. Consistency of theory demands close articulation with the elementary grades, but unfortunately it had not generally been provided for when junior high schools were instituted. The articulation should be in subject-matter, in methods of teaching, and in social control of the pupils.

As pointed out elsewhere, it is impracticable and unwise to prescribe definite work for all junior high schools regardless of what has been accomplished in the elementary grades. The recognized variability in elementary schools makes it necessary for the junior-high-school program to base itself soundly on what has preceded. Whether the junior high school is to be in the first instance exploratory, a continuation of elementary work, or a preparation for secondary studies, it must know definitely on what it may build. In all probability much of the work now given in grades 5-8 of the elementary school will need to be redistributed to make the articulation satisfactory.

The questionnaire asked on this point, "What changes in the curriculum or courses of study in the elementary

school have been made because of the junior high-school organization?" To this the replies were made by 255 cities as summarized in Table XIV:

TABLE XIV

CHANGES IN CURRICULUM OR COURSES OF STUDY IN THE ELEMENTARY SCHOOL BECAUSE OF THE JUNIOR-HIGH-SCHOOL ORGANIZATION

1. None	132
2. To meet junior-high-school requirements	3
3. Addition of elections	2
4. Simplifying and eliminating useless material	9
5. More ground covered in various essentials	12
6. Entirely revised	8
7. More applied subjects	1
8. More industrial work	19
9. Larger choice of subjects	2
10. Departmental in one subject	1
11. Organized like junior high school	1
12. English	11
13. Grammar	3
14. Foreign language introduced	17
15. History	4
16. Civics	1
17. Geography	6
18. General science introduced	8
19. Arithmetic	12
20. Algebra added	2
21. Drawing	1

These answers probably should not be taken at their face value, for several of them (e.g., numbers 14 and 19) suggest that the question was not carefully read. It is not likely that because of a junior-high-school organization secondary-school subjects were introduced into more than ten per cent of the schools. Only ten or fifteen per cent apparently

claim to have made any extensive changes in the subject-matter taught in the elementary grades.

To the additional questions, "Are the outlines of such modified courses of study available?" there were 76 affirmative and 58 negative answers. Twenty-four of the cities sent with the replies copies of their "courses of study," which in nearly every case proved to be a program of studies or an outline of curricula. If a thoroughgoing readjustment of elementary-school work has anywhere been made in preparation for the establishment of a junior high school, the fact has escaped notice. Without this preparation it is surprising that the junior high school has been as successful as it seems to be. Du Shane¹ and others have pointed out that conditions in grades 4-6 are far from satisfactory, so that it would seem reasonable to expect a superintendent to attack the problem of these grades at the same time or before he undertakes a reorganization higher up.

Upon the efficiency of the work done here [grades 4-6] will depend in large measure the success of any attempt to reorganize the upper grades. Hand in hand with the development of a new point of view for the seventh and eighth grades should go a concerted and intelligent effort (1) to insure better teaching and a more mature and permanent body of teachers for the middle grades, and (2) to formulate principles that shall serve to govern the instruction and training of children between eight and twelve, at least as satisfactorily as analogous principles are now governing the work of the primary grades and the work that has to do with the adolescent period.²

Fortunately for one planning a modification of elementary school work a general contribution has already been made in

¹ *Elementary School Journal*, vol. 17, pp. 89-105, 151-62.

² Bagley and Judd, *Sc. Rev.*, vol. 26, p. 316.

the several reports of the Committee on Minimum Essentials.¹ A number of school systems have also laid down minimum requirements for the various grades, some of them so simple as to make it improbable that any teacher will consider them maximum requirements as well. Among these formulations may be mentioned, as prepared with especial care and given experimental sanction, that of the City of Boston.²

When minimum requirements for the elementary grades may be really counted on as possessed by all of the pupils, an intelligent program of courses of study for the junior high school may be devised — courses that are soundly based on the achievement of pupils and leading gradually toward the goals set up for the new organization. Anything less invites disappointment.

The traditional method of promoting pupils, "when they have successfully completed the work of the preceding grade," is still the practice in the majority of junior high schools. Here and there a principal voices dissatisfaction at the varied achievements of the pupils in the elementary grades and their consequent lack of preparation for doing the junior-high-school work as planned. Principal Wetzel, of Trenton, New Jersey, writes:

I cannot close my report without calling attention to the great need of similar coördination between the junior school and the first six grades.

¹ Part I of the *Fourteenth, Sixteenth, and Seventeenth Year-Books of the National Society for the Study of Education*.

² School Documents 11, 15, 16 (1915), 11 (1916), 18, 19 (1917). Published by the Boston Public Schools. See also *Second Report of the Committee on the Elimination of Subject-Matter*, Iowa State Teachers' Association, 1916.

I know of no better way to bring this about than to establish definite standards of achievement in the common branches for the first six grades. Such standards are now available. Their adoption in Trenton would stress the kind of work which should be done in these grades. Little headway can be made in the junior school until this is done, especially in spelling, composition and reading, writing and arithmetic. Under writing I include the making of figures.

Standardized tests in these fundamentals as accepted in the most progressive communities would keep in the lower grades many pupils that now come to the junior school. It is not the fault of the pupils. The fault is rather in the lack of a definite and limited program tested by accepted standards. All school experience shows that teachers will try to secure the results that are sought in tests. The New York Regents' system is a conspicuous example. The establishment in Trenton of standardized tests in the subjects mentioned will do more to promote the junior-school program than any other one thing. Brown and Coffman (*How to Teach Arithmetic*, p. 92) say: "Under the influence of the movement for the training of the higher rational processes we are in great danger of failing to reduce to an automatic basis the skills formerly emphasized. The place primarily to reduce these skills to an automatic basis is in the first six grades.

There are evidences that promotion is more and more coming to be made on the basis primarily of the individual pupil's welfare. This means that promotion shall be made when it is likely for any reason to be for the pupil's benefit, whether he has "passed" in his preliminary work or not. One will sympathize with this principle in proportion as he is cognizant of the unreliability of teachers' marks. The Commission on the Reorganization of Secondary Education recommends ¹ specifically "that secondary schools admit, and provide suitable instruction for, all pupils who are in any respect so mature that they would derive more benefit

¹ *Report on Cardinal Principles of Secondary Education*, page 19.

from the secondary school than from the elementary school."⁹ Among other bodies that have made similar recommendations is the New Jersey Council of Education. It recommended in 1914 that there should be admitted to the junior high schools (a) graduates of the sixth grade who shall follow academic, industrial, or domestic science, or commercial curricula, and (b) retarded pupils of twelve to fourteen years of age, who shall be arranged in classes taking such a combination of manual arts and academic work as seems best. The promotion to the junior high school of the average pupils is approved by teachers in the elementary grades because of the fact that it makes easier their problems of discipline and hence permits of better teaching for the normal pupils who remain.

For some years pupils have been admitted to the University of Wisconsin six-year high school if they possess the ability to read, write, and speak simple English with reasonable ease and accuracy, have good health, and are twelve years of age. Many other cities have made special provision for retarded pupils who, being discouraged with school tasks or strongly attracted by opportunities to work, were on the point of leaving. Among such cities may be mentioned Newton, Massachusetts, where adjustment classes in the Vocational High School succeeded in returning a few of these pupils to the regular academic curriculum, sent more to the Technical High School, transferred more still to the vocational curricula, and reported that they held nearly all the remainder for varying periods of time by means of work convincingly worth while and adjusted to individual needs. The possibilities in such work are in proportion to the will-

ingness of the school to abandon its traditional "standards" and adjust its instruction to the individual pupil's needs and capacities. The discouragement felt by backward pupils when classed with others who, though perhaps their intellectual superiors, are in other respects from two to ten years younger, has not been generally and adequately recognized. One superintendent writes of this "promotion *per vim*":

It has permitted the boy who is over five feet six inches to say, "I am going to high school." They like to say that. It has shown these boys that all the school children in the city are not smaller than they. It has enabled them to walk the streets on the way to school with the fellows larger than themselves, not with the little ones.

Douglass¹ points out that California and Vermont, at least, legally prescribe for admission to the junior high school the completion of the sixth grade. But in California this requirement is frequently ignored. The practice in Vermont will be illustrated by the following quotation² from Dr. Hillegas, the State Commissioner of Education:

In a number of cases we have been bold enough to promote stupid boys and girls from as low as the fifth grade directly into the junior high school. Results have been most satisfactory. In one of the larger junior high schools considerable groups of such retarded and incompetent boys and girls were thus promoted. At the beginning of the second year new teachers in the school were unable to select the pupils thus advanced.

A large part of the success of these irregular promotions is due, of course, to the provision of special work for the over-age pupils; but it must not be overlooked that there are at least three other causes: a mastery of the elementary

¹ *Fifteenth Year-Book*, p. 48. ² *Teachers College Record*, vol. 19, p. 343.

work as usually prescribed is not invariably essential to the successful acquisition of all later offerings; pupils sometimes become estopped from normal progress by unfortunate personal relations with teachers; and there is unquestionably a greater stimulus to the retarded pupils to work among other boys and girls of their own size and age.

That there are in junior high schools numerous departures from the usual practice of promoting pupils only when they have "successfully completed" the sixth grade will be seen from the appended table. Of the 250 schools answering the question "Under what conditions, if any, do you admit pupils who have not completed grade VI?" 150, or 60 per cent, reply that they do under certain conditions admit pupils who are likely to profit by the junior-high-school work. It is interesting to record that two schools have measured the ability of entering pupils to do this work partly by standard psychological and educational tests.

TABLE XV
CONDITIONS FOR ADMISSION TO 250 JUNIOR HIGH SCHOOLS

	Number	Per cent
Completion of grade 6.....	100	40
Other conditions.....	150	60
<hr/>		
Maturity of pupil.....	5*	3
Over-age	70	47
Over-size.....	3	2
Dull and over-age.....	5	3
According to individual need.....	15	10
On recommendation of superintendent, or former teacher or principal.....	15	10
Probable ability to do work.....	23	15
Conditioned.....	40	27

* As some schools report more than one condition, these numbers total more than 150.

The North Central Association has for several years approved promotion on the basis of individual need; and Davis states that

108 school systems, or 36.9 per cent of the entire 293 which made reports, do admit pupils to the junior-high-school privileges before completing the sixth grade. In other words, these schools base promotion on physical development and chronological age, as well as on intellectual attainments of a fixed conventional type.¹

TABLE XVI
PROVISIONS MADE IN 161 JUNIOR HIGH SCHOOLS FOR PUPILS
IRREGULARLY PROMOTED

<i>Kind</i>	<i>Number of schools</i>
Special room and teacher.....	7
Opportunity rooms.....	1
Batavia work in weak subjects.....	4
Pupils elect from program of studies.....	4
Work depending on ability.....	48
Vocational (industrial) work.....	20
Prevocational work.....	2
Manual training or domestic science.....	25
One or more fewer subjects.....	6
General except foreign language.....	1
Electives and extras omitted.....	2
Partly ungraded.....	2
Sciences.....	5
Civics.....	1
English.....	5
Mathematics.....	3
General literary.....	1
Commercial.....	1
No special work.....	17
No provision made.....	6
Total.....	161

¹ *School Review*, vol. 26, pp. 330-31.

One hundred and sixty-one schools reported what provision they made for the pupils irregularly promoted from the elementary grades. It will be seen from the table that there is a strong tendency to assign these pupils to such work as they can do and as is likely to be of most value to them. After a few years a study should be made of the effects of these various provisions.

A problem found in various parts of the country is the disposition of pupils who come from rural or parochial schools with conventional programs into the junior high school with an enriched curriculum. These pupils as a rule have had no training in industrial or household arts, no foreign language, and only formal English, arithmetic, history, or geography. If there be enough of these pupils entering any junior high school at the same time, the problem is easily solved by making of them one class with the usual ninth-grade program. When the number is smaller than that of a normal class, the pupils ordinarily are assigned in the school wherever the principal thinks they can work to the best advantage, omitting from their program such elective work as they cannot profitably take. The practice of some schools of assigning these pupils to classes that have already continued a new subject for from two to four semesters is a sad commentary on the value attributed to that work by the principal or to his concern with the welfare of the new pupils.

The percentages of pupils from eight-grade elementary schools and from parochial schools entering the ninth grade of 187 junior high schools are shown in the accompanying table. It appears that in more than half the schools the

proportion is insignificant, but that in eighteen the proportion is more than a quarter of the entire ninth-grade enrollment.

TABLE XVII
PERCENTAGES OF NINTH-GRADE PUPILS ENTERING FROM
OTHER EIGHT-GRADE SCHOOLS

<i>Percentages</i>	<i>Number of schools</i>
None.....	75
Very few.....	7
Less than one per cent.....	8
1 to 9 per cent.....	44
10 to 14 per cent.....	19
15 to 19 per cent.....	6
20 to 24 per cent.....	8
25 to 29 per cent.....	8
30 to 34 per cent.....	1
35 to 39 per cent.....	3
60 to 64 per cent.....	3
70 to 74 per cent.....	1
75 to 79 per cent.....	1
85 to 89 per cent.....	1
"A considerable number".....	2
Total.....	187

The work assigned such pupils varies considerably. From the appended table it may be seen, however, that the effort in approximately one seventh of the schools is to provide for these pupils programs according to their needs and abilities; in the others there seems to be the old adjustment of the pupil rather than of the work. In fact, approximately one tenth of the schools provide a program which insures a loss of time for these pupils entering the ninth grade from outside schools.

TABLE XVIII

WORK ASSIGNED PUPILS ENTERING THE NINTH GRADE OF
JUNIOR HIGH SCHOOLS FROM OTHER ELEMENTARY SCHOOLS

<i>Curriculum</i>	<i>Number of schools</i>
Regular low eighth grade.....	1
On trial in high eighth grade.....	1
Some eighth-grade work.....	6
Regular ninth grade.....	96
Classes paralleling high-school work.....	2
Elective.....	13
Fitted in as well as possible.....	6
Special classes.....	2
Depends on pupil.....	2
Work necessary to enter high-school course.....	1
Half-year of general science.....	1
Two years of foreign language.....	1
Work they have not had.....	1
No foreign language, science, or manual arts.....	1
Vocational as far as possible.....	1
Agriculture or domestic science.....	2
No provisions made.....	3
Total.....	140

Superintendent Foster, of Dansville, New York, has the problem of classifying in his junior high school entrants from parochial schools in his city. He writes:

... Two years ago we overcame this difficulty to a large degree by making arrangements with the pastors of the two parochial schools to have their eighth-year students sent to our school the last three fourths of an hour in the forenoon to receive the special work of our junior high school. At conferences of the neighboring rural-school teachers which the district superintendent held in our school, we explained to the teachers the situation and urged them to have their students come to our school for at least the eighth year. The response has been so general that but four students entering our senior high school this year lacked any of the junior high-school work. The result of the arrangement with the parochial

schools is that the wide gap between them and the senior high school has been bridged. The parochial student has become used to the high school and has learned to like it; hence he continues his work in high school.

The articulation in methods of instruction should be as carefully prepared as that in subject-matter. The methods used in high schools on the whole differ rather markedly from those most common in the grades, and it would manifestly be unwise to have them introduced abruptly at the beginning of the seventh year. All experienced and successful teachers tend to adjust themselves to the needs of new and different groups of pupils, however, especially if by means of supervision they have been led to instruct pupils rather than merely to impart facts regardless of the use that will be made of them. It is especially important that they make this adjustment in the junior high school, where the emphasis has, at least in theory, been laid on satisfying the needs of the individual pupil. Observation of many classes in some sixty junior high schools leads to the conclusion that generally speaking the instruction is better adapted to the pupils than it is in the first year of high schools, but that the adaptation has come largely through the skill of the teachers selected rather than through the systematic application of a clearly stated theory.

The project-method of teaching, as proposed by Dewey¹ and by Kilpatrick,² and as increasingly used in the lower grades, was found to be approved by most of the principals and by many of the teachers with whom the matter was discussed; but, as in the high schools, there is lacking the con-

¹ *How We Think.* Teachers College Record, vol. 19, pp. 319-35.

stant, time-consuming supervision that is necessary for successful performance. It can be safely asserted, however, that more project teaching may be found to-day in the junior high schools than in any higher institutions except the graduate law schools. The project teaching in the Vermont junior high schools may be cited as illustrative of what may be achieved by professional supervision of young teachers. The socialized recitation, too, is frequently found. It was admirably developed in Lincoln, Nebraska, by Superintendent Fred M. Hunter and his assistants, and has been continued and developed under Superintendent Newlon.

Departmentalization, which in some degree is common to nearly all junior high schools, is likely to exert a strong influence on teaching. It would seem to be a self-evident fact that a sudden change to full departmental teaching at the beginning of the seventh grade would be a violation of the principle of articulation. Certainly any bad effects of sudden departmentalization at the beginning of the ninth grade are likely to be worse if introduced two years earlier. The conclusion is forced upon us that departmentalization in the junior high school, like other changes in teaching, should be gradual. The argument is strong, too, that a number of the teachers in the new type of transitional school should be recruited from the intermediate or grammar grades of the elementary school. To what extent this is done will be reported later.¹

A third phase in which articulation with the elementary grades is desirable is that of social control. Here perhaps the greatest success is manifested. The junior high school

¹ Chapter VIII.

very generally has recognized that young pupils changing from the constant oversight of one teacher to a departmental organization need some particular and personal direction, and have provided for this in a variety of ways.¹ In some schools the pupils are introduced gradually to the larger freedom of the high school. In Ellenville, New York, the pupils when they come from the sixth grades are assigned to two small study-rooms, seating about forty-five pupils each — the girls in one, the boys in the other. Here they remain one year before being transferred to the large common study hall. Superintendent Farmer, of Renville, Minnesota, where the pupils in grades 7-8 are segregated from those in grade 9, writes:

If conditions had made it possible, I would have placed all the pupils of the seventh, eighth, and ninth grades in one assembly room under the principal. Our assembly room was not large enough for that; so we placed the seventh grade in one room under the immediate charge of the assistant principal and the eighth and ninth grades in another assembly room (just across the hall) in charge of the principal. I now believe that is the ideal way to arrange this, for several reasons. (1) It makes the change from the conditions under which the pupils have formerly worked in the grades to the high school conditions, more gradual. I refer to the change to departmental work in their studies and the new conditions which such a change brings about. (2) It retains these pupils a little longer under the more personal care of one teacher, a condition which I believe should continue through this stage of the children's development. These pupils pass to the shop, sewing-room, and to the other assembly rooms for some of their work and other teachers come to them for some, but they feel that they have their own room and their own teacher to whom they are responsible. They join with the other two grades in many general exercises. (3) It provides for a sort of system of promoting good teachers

¹ See chapter x.

through several positions and thus retains them in the system longer. They can advance from the assistant principalship of the junior high school, to the principalship of that school, and from there to the principalship of the senior high school. This has been done here.

In Grand Rapids, Michigan, one or two rooms are provided for the pupils who cannot adjust themselves readily to their new privileges and responsibilities. In these rooms they have all of their work under a single teacher until they manifest their willingness and ability to participate in the general plan of the school. The many plans used for social control are evidence of the recognition of the responsibility the school has in this matter; and when responsibility is acknowledged for a problem of this kind, the schools are very likely to work out satisfactory solutions.

It is often asserted that the removal of the grammar-grade pupils from the elementary school makes the work there easier, since the purposes are less complex and the problem of discipline is lessened. Superintendent Giles, of Richmond, Indiana, where a form of the junior high school has been established for a number of years, summarizes¹ the opinions of his teachers as to the effect on the first six grades as follows:

Principals and teachers agree that the problem of administration of the school, so far as discipline, supervision, elimination, and the curriculum are concerned, is much simplified where the seventh and eighth grades are not present. On the more vital question of the educational effect of older children associating with the younger, the decision still lies with segregation, unless there should be reorganization along the lines of the Gary plan. . . . Public-school sentiment in Richmond favors segregation.

¹ *Educational Administration and Supervision*, vol. 3, p. 274.

District Superintendent Taylor, of New York City, points out ¹ an effect of the junior high school on the abbreviated elementary schools, an effect which so far as it prevails is likely to be found only in the larger cities. He states that in New York "many progressive teachers avoid" the six-year elementary school, "since they know that, to secure the higher salaries" paid to teachers with special licenses to teach in the seventh and eighth grades, "they will have to go elsewhere. Principals also shun such schools. . . . New teachers refuse to go to these schools." It has also been argued that it is unfair to take from the elementary schools the best and more ambitious teachers to make junior high schools successful. To remedy such conditions among others, Bagley proposes that all teachers in public schools be similarly trained and similarly paid.

C. RELATION TO THE SENIOR HIGH SCHOOL

When the junior high school is discussed, some one almost invariably makes a prophecy that its establishment will open a gap in the school system between the ninth and tenth grades. This prophecy has to an extent been fulfilled, especially in cities where the junior and senior high schools are in separate buildings and under different management. The fact that the gap is, or may be, moved upward one year is to the credit of the junior high school; but it is highly desirable that there be as few interruptions as possible to the progress of those fortunate pupils who can go forward for further study.

The gap between junior and senior high schools is not a

¹ *New York Globe and Commercial Advertiser*, February 15, 1918.

necessity inherent in the new organization; it is caused primarily by a failure on the part of the administration to secure an understanding by the teachers of the proper relations between the two institutions. In so far as the junior high school gives the final education to pupils going prematurely to work, it has no relations with the senior school; in so far as it sends its pupils on for advanced study, it assumes and demands obligations, which must be clearly seen to be fulfilled. The gap may be minimized if the schools articulate with respect to plans for admission to the senior high school, distribution of subject-matter, transition in methods of teaching, and in social control.

About the method of admission of junior-high-school pupils into the senior high school we find a contest similar to that which has existed between the high school and the college for years past. The junior institution demands the right "to do what is best" for its pupils and at the end of its curriculum send them into the higher school without examination; the senior institution to a degree admits this right providing that it may designate the studies of the lower school, approve its work by inspection, and reject its graduates if they cannot satisfactorily do the advanced work. But so far machinery has seldom been provided the higher school either for supervising the junior-high-school work or even for knowing definitely and fully what it is. If the program of exploration, proposed in chapter II, is accepted for the junior high school, the senior institution will receive its pupils already intelligently segregated for its curricula, and thus will be enabled to make a better contribution than formerly to each group. If such a program is not accepted,

we shall probably have the contest between the two schools still further accentuated.

In 1918 the North Central Association voted to recommend the following admission requirements for the senior high school:

- a. All pupils who complete the work of the junior high school should be admitted to the senior high school.
- b. Pupils who have spent two years in the junior high school and have shown superior ability both as to quality of the work done and the quantity accomplished, should be admitted to the senior high school.
- c. Over-age pupils who have not completed the junior high school should be admitted to the senior high school if it appears that their educational needs can be better met in the senior high school.

Under conditions as they have developed, 114 of the 284 junior high schools answering the question regarding admission, give a final examination to pupils before promoting them to the senior high schools. It is probable that some principals returning the questionnaire had in mind the regular term examinations and that therefore the per cent of schools setting a formal final examination is really smaller than forty. There is just as much reason for giving a final comprehensive examination at the end of the junior high school as at any other period; but there is no evidence that such an examination is more necessary here than elsewhere. If the junior high school should have a final comprehensive examination, so should the senior high school and the college.

Formal graduation from schools is said by some to aid retention up to the end of the course, but to facilitate elimination before a new course in a new school begins. In so

far as this is true, graduating exercises would be good for those pupils who are leaving school early for work and bad for those who are uncertain about continuing in school for advanced study. Of the 279 junior high schools reporting on this item, 126, or 45.2 per cent, emphasize the completion of their curricula by holding graduation exercises. In the North Central territory, according to Davis, completion of the curricula is much less frequently so emphasized; the Springfield study found that 36 per cent of 81 junior high schools hold some sort of graduation exercises.

So far as is known every high school receives, on the recommendation of the junior high school, pupils who have completed one of the intermediate curricula. Difficulties occur when a pupil is promoted with a failure in some subject that he desires to continue, when he claims advanced credit, or when by trial he proves unable to continue satisfactorily the high-school work that he elects or to which he is assigned.

If the senior high schools had strictly three-year curricula, it would prove embarrassing for pupils who on entrance needed one or more courses which they might have taken in the junior school. (The colleges frequently complain of the necessity of offering beginning courses in modern foreign languages for students who did not elect French, German, or Spanish in high school.) But many senior high schools that are separated from the one or more contributing junior high schools have a number of ninth-grade pupils; consequently it is not difficult for them to arrange a program for a pupil who, classified in the tenth grade or higher, needs a ninth-grade subject. To the question, "Does the senior

high school offer classes in all elementary subjects that a promoted student may have failed to pass?" there were 138 answers from places where the junior and senior schools are in separate buildings. Thirty-one, or 22.5 per cent, are reported as offering all such elementary courses; but 78, or 58 per cent, do not offer any of the ninth-grade work at all. The remaining schools seem to offer such courses as are most needed.

Almost all the senior high schools unquestioningly accept the junior high-school recommendations for advanced credit. Of 262 schools that reported on this topic, only 16, or 6 per cent, say that their recommendations are not approved. There is no reason to believe that this proportion is larger among the schools that did not report — most of them, probably, because the issue had not yet been raised.

The amount of advanced credit carried to the high school is not large — usually, I estimate, about two units in addition to the four normally earned in the ninth grade. As a rule one year's high-school credit is given for secondary subjects successfully taken in both the seventh and eighth grades. This proportion seems to have been arrived at by computing the total amount of time given to these subjects and by making allowance for the immaturity of the pupils rather than by measuring their achievements. As more satisfactory tests are devised for the secondary-school subjects, standard achievements are likely to be generally demanded. In such subjects as mathematics and Latin it is entirely feasible to set up such standards at the present time. Occasionally credit is given in high school according to the mark earned by the pupil in his previous study of a subject.

In Cleveland, for instance, pupils who earned in the grammar grades a mark of 75 to 100 in German were advanced in that subject to the third-term class; those who earned 60 to 74 were advanced one term; and the others began German over again. Table XIX shows the credits assigned in Los Angeles to secondary-school subjects taken in the intermediate schools:

TABLE XIX
HIGH-SCHOOL CREDITS FOR JUNIOR-HIGH-SCHOOL WORK

Subject	Low VII	High VII	Low VIII	High VIII	Low IX	High IX
Algebra.....	..	..	$\frac{1}{2}$	$\frac{1}{2}$	1	..
Ancient history.....	..	..	..	..	1	1
Bookkeeping.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Commercial arithmetic.....	..	..	..	..	1	1
Cookery.....	..	..	..	..	$\frac{1}{2}$	$\frac{1}{2}$
English.....	..	..	..	..	1	1
Freehand drawing.....	..	..	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$
French.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1
Geometry.....	..	..	..	..	..	1
German.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1
Latin.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1
Mechanical drawing.....	..	..	$\frac{1}{2}$	$\frac{1}{2}$	1	1
Music.....	..	..	..	..	$\frac{1}{5}$	$\frac{1}{5}$
Glee club or orchestra.....	..	..	..	..	$\frac{2}{5}$	$\frac{2}{5}$
Oral English.....	..	..	..	..	$\frac{1}{5}$	$\frac{1}{5}$
Penmanship.....	..	..	..	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$
Physiography.....	..	..	..	..	1	1
Sewing.....	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$
Spanish.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1
Stenography.....	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1
Woodwork.....	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$

Credit for outside work is occasionally allowed, thus advancing a pupil toward graduation. There are a number of cities — for instance, Lewiston, Idaho — that have prepared rules and a syllabus for music studied under private

teachers; and several reports state that if provisions are definitely made beforehand for this credit, the plan has worked very satisfactorily.

The articulation of subject-matter has been attempted chiefly by introducing into the seventh and eighth grades, usually as electives, foreign languages, English composition and "classics," commercial courses, shop-work for boys and household arts for girls, with, less frequently, general science and composite mathematics. As textbooks in these subjects had not up to 1916 been satisfactorily prepared for pupils of twelve to fourteen years of age, the junior high schools were under a serious handicap, which was materially increased by the paucity of adequately trained teachers. Pioneering in education, no less than in other fields, requires unusual ability and time, and seldom were the junior-high-school teachers given light schedules so that they might adapt to the needs of young pupils courses worked out for older ones. The achievement is a tribute to the ingenuity, resourcefulness, and energy of those teachers who without adequate preparation or time, but inspired with an ideal, attempted, usually with little or no direction, the adaptation of material. Frequently in newly established junior high schools an individual teacher was found who despite obstacles was doing most satisfactory pioneer work, but seldom was there evidence that through careful planning the whole corps had adapted material to the younger pupils or even understood the fundamental principles by which they should attempt the task. The responsibility for this failure in most cases should be laid on the superintendent of schools, who usually excuses himself on the grounds of cost. This

unfortunate situation has considerably improved since 1916. Several States — notably New York and Vermont — and a number of cities — for example, Rochester, Boston, Grand Rapids, and Neodesha — have prepared syllabi for the various subjects taught in the junior high school.

In the future the articulation of the junior with the senior high schools in respect to subject-matter is likely to be made considerably closer by the textbooks that are now being prepared in considerable numbers for the younger pupils. The danger, of course, is that many of these books will be slight adaptations of older texts that have been used in the conventional grammar grades and in the high schools, and that the revision will not be based on clear and sound conceptions of what the junior high school is intended to accomplish. But a study of the texts issued shows distinct improvement; they are on the whole more progressive than texts prepared for any other grade of pupils.

When satisfactory courses in the various subjects of secondary education have been worked out for the junior high schools, it will be necessary for the senior high schools to make corresponding adjustments in their courses in these subjects. This they have not yet done. What kind of work and how much, for instance, will be offered to pupils who are promoted to the tenth grade with two years' sound credit in a foreign language? Will this class of pupils stimulate the upward extension of the high school into a junior college? Will they be given the conventional amount of the subject and fill their programs with other electives? Or will they be graduated from the senior high school at an earlier age? There are many similar questions that must be an-

swnered in the preparation of a program that will promise a close articulation of all the units of our educational system.¹

The articulation of junior and senior schools by means of adjustments in methods of teaching seems to have in it great possibilities; and in the majority of classes visited there was used a method intermediate between that of the more elementary grades and that of the senior high school. In most instances, however, the modification of method was apparently due more to the common-sense adjustment of a teacher to the needs of the type of pupils with whom he was constantly thrown and to the circumstances of departmentalization than to any consciousness of a program of articulation. Perhaps this is altogether as it should be. Usually on visiting a class it was not difficult to guess whether the teacher's previous experience had been in higher or in lower grades, for whatever adjustment there is usually leaves much of the influence of former experience. Many junior high schools that are in the same buildings with elementary or with higher grades share the teachers; others are on the same campus, so that either pupils or teachers may go from building to building for work. In these cases teachers tend to continue the type of method throughout their work, differing in their degrees of adaptability. Youngstown, Ohio, is said to have coördinating teachers, and the plan used at Rochester tends to unify the methods of teaching.²

Two hundred and fifteen junior high schools answered the question, "In what per cent of the subjects is there active

¹ For data concerning the continuance of subjects elected in the junior high school, see chapter XIII.

² See page 123 f.

supervision by a representative of the senior high school?" In 131, or 60.9 per cent, there is no such supervision; in 20, or 9.3 per cent, the supervision is in fewer than half the subjects; in 42, or 19.5 per cent, it is in more than half; in 19 it is in "a few subjects," and in three it is in foreign languages only.

Davis reports that in the 293 North Central junior high schools 27 per cent have supervision by the superintendent alone, 57 per cent by the junior high-school principal, 24.6 per cent by the senior high-school principal, and 6.5 per cent by "others." As the total percentage is considerably over 100, it is evident that a number of the schools — how many we are not told — have supervision by more than one official. The Springfield study reports that teaching is supervised by the junior-high-school principal in 58 cases, by the senior-high-school principal in 17, by the superintendent or his assistant in 60, by the heads of senior-high-school departments in 8, by the heads of junior-high-school departments in 11, and by general supervisors of elementary and junior high schools in 25. As the report does not state how many of the 88 schools questioned — six of them having the 6-6 plan — returned answers to this item, the figures cannot be turned into percentages.

It cannot be claimed that practice in the matter of articulating the junior and senior schools by means of supervision is satisfactory. The junior high school has one obligation to pupils who will not continue their education further, and with its program and practice for these pupils the senior high school has only a fraternal concern; it has another obligation when it undertakes to sort pupils and prepare

them to pursue satisfactorily the courses offered by the higher institution, and with its program and practice for these pupils the high school has or should have a direct responsibility. It may be that the junior high school should adapt its courses to the curricula for which it prepares; it may be that the senior high school should modify its courses to complement the earlier work: it is more probable, however, that each school should make some changes so as to secure the desired satisfactory articulation. This is likely to result only from definite provisions for extended conferences and constant supervision, which though costly in time and money are certain to be educationally economical.

The relation between the social control of pupils in the junior high school and that in the senior high school is close. By and large, junior high schools tend to give to their pupils a better and more gradual increase in self-control and in extra-curricular activities, and therefore senior high schools have a basis on which to build when the pupils are promoted. As will be shown elsewhere, the relations in this respect between the intermediate and the high school are more satisfactory on the whole than those between the intermediate and the elementary school.

Rochester, New York, is conspicuous for its careful planning for its junior high schools and their articulation with the elementary and higher grades. For a year before the establishment of the Washington Junior High School Saturday classes were held for the training of teachers who were candidates for positions in the new school. Many of those who were selected attended during the summer some college or university for further preparation. The Washington

Junior High School was assigned two principals who had had successful experience in elementary schools, one for general administration and one for working out with the teachers courses of study and for the supervision of instruction. In addition, from the two high schools heads of the departments of English, modern foreign languages, Latin, mathematics, and science were assigned to the junior high school for about half their time, to supervise the instruction and to work with the teachers in developing courses of study consonant with the aims of the school and suitable to the capacities of the pupils. To acquire an appreciation of the problems these heads of departments also taught one or more of the classes. One assistant superintendent and the supervisors of industrial work also gave much time to the school. This program was, of course, expensive in the amount of money required, but it was at the same time educationally economical in that it resulted in carefully prepared courses in all of the subjects of study and a corps of teachers trained to understand the fundamental purposes of the school and to administer the courses. These courses are now ready for the new junior high schools to be built, and from the corps teachers may be drawn to form the nuclei in the new schools.

An illustration of a very different type of "economical program," unfortunately far more typical in the establishment of junior high schools, is that followed by one of our largest cities. Several junior high schools were established almost overnight, chiefly through the insistence of ambitious elementary-school principals that they be allowed to add a ninth grade in their buildings, partly "to provide for the

pupils of the neighborhood" and partly "to relieve the over-crowded high schools." The assistant superintendent in charge, being more than busy with another important phase of the school system, had little time to give to the so-called "junior high schools." Each principal, with or without the coöperation of his teachers, prepared for his school curricula, which were *pro forma* approved by the superintendent in charge. The courses of study were largely left to the individual teachers, who too frequently attempted merely to follow texts prepared for older pupils. Teachers or principals on their own initiative sought the advice of the high schools, but there was no serious attempt made to postulate and popularize fundamental principles for the junior high-school work, to develop and coördinate the courses, to extend to other schools practice proved successful in any one, or to articulate the work with that of the higher receiving schools. Moreover, the teachers assigned to the ninth-grade work all had to be drawn from those already in charge of seventh- and eighth-grade classes, regardless of the adequacy of their training in the subjects assigned them. In one instance a teacher undertook a subject that she had not studied for more than a quarter of a century. It will occasion no surprise when we learn that pupils from these "junior high schools made poor records when given a central examination or when they were transferred to the tenth grade." But in spite of these handicaps, the junior high schools seem to have succeeded in this city in developing a desirable *esprit de corps*, in holding pupils, and in inspiring them to greater ambition. The experience of the past few years should convince this city as well as others of the econ-

omy of an initial expense for overhead to provide adequately a program that will lead to a satisfactory articulation with the senior high school and with the demands of the outside world.

CHAPTER V

SPECIAL FUNCTIONS OF THE JUNIOR HIGH SCHOOL

A. DEPARTMENTAL TEACHING

THE arguments concerning departmental teaching have been collected from a number of sources and set down below in a rough apposition of the positive and negative. This display is more or less academic, however, as the great majority of schools recognized as "progressive" have already accepted some form of departmentalization for the upper grades; in fact, in order to secure for pupils such advantages as these schools attempt to provide, it is an absolute necessity. The only real questions to-day are how far down in the grades it should extend and how gradually it should be introduced.

ARGUMENTS FOR

ARGUMENTS AGAINST

I. Concerning the administration

<ol style="list-style-type: none">1. As special equipment and illustrative matter are needed only for rooms in which the subjects demanding them are taught, money is saved which may be expended for more and better equipment.2. It makes possible the use of special teachers — of music, for example — without disrupting the program or causing the regular teacher to be idle.3. It tends to guarantee to each subject the time assigned to it in the program.	<ol style="list-style-type: none">1. It increases the difficulty of organization and administration, especially as regards the making of the program of recitations.2. The program cannot be altered to provide extra time for unusually difficult lessons.
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- 4. It enables the supervisor to fix the responsibility for the work accomplished in a subject.
- 5. It facilitates the promotion of pupils by subjects.
- 6. It facilitates the special promotion or demotion of an individual pupil according to his need.
- 7. It simplifies and makes more effective the task of supervision.
- 8. It tends to lessen the gap between the elementary school and the high school.
- 3. It makes more difficult the task of placing responsibility for poor teaching.
- 4. It results in confusion in detaining pupils after school, unless it is agreed that each department may detain on only one afternoon each week.
- 5. In the departmental system marks are not proportionately coöordinated.
- 6. Uncoöordinated teachers tend to overwork the pupils.

II. *Concerning the teaching*

- 9. It attracts better prepared teachers to work in the grades.
- 10. It enables a teacher to make more thorough preparation, both generally and for each day's lessons.
- 11. It stimulates interest and so encourages preparation, both general and detailed.
- 12. It results in economy of preparation, in that all teachers do not have to prepare in all subjects.
- 13. It enables a school to secure good teaching for all subjects.
- 14. It results in greater interest by teachers and hence better work.
- 15. Teachers are stimulated to better work by a knowledge that they are compared daily by the pupils with the other teachers.
- 16. It prevents waste of time due to readjustments, useless reviews, lack of knowledge of quantity and quality of work previously
- 7. It tends to make teachers narrowed specialists, interested in a special subject without reference to its interrelations.
- 8. If exigencies demand that the departmental teacher teach something other than his own subject, he will do it half-heartedly.

done. (Note the assumption that the same departmental teacher has the pupils for two or more successive terms.)

III. *Concerning the pupils*

17. Variety of teachers with all their characteristics, of methods, of rooms, and of general conditions, results in increased interest and consequently better work.
18. The influence of an unusual teacher — unusually good or unusually bad — is not confined to a small group of pupils.
19. Because of variety, physical relief through changing from room to room, better teaching and greater interest, the problem of discipline is lessened.
20. Because greater responsibility is placed on pupils, they develop greater initiative and self-reliance.
21. Children will be healthier as the school organization itself provides for frequent movement.
22. A pupil will be understood better and hence receive better advice concerning his social, educational, and vocational needs, for —
 - a. Among all his teachers a pupil is likely to find at least one who will understand him and to whom he will talk freely about himself;
 - b. Contact with a pupil for two or more terms through one subject gives a teacher a better knowledge of that pupil
9. Pupils are confused in adjusting themselves to several teachers.
10. Confusion in changing classes and lack of definite responsibility for a group of pupils by any teacher result in poor discipline.
11. Pupils are too immature for the amount of responsibility and self-direction they must assume.
12. The personal influence of the teacher is lost or dissipated.
13. No one assumes responsibility for such matters as penmanship, spelling, oral expression, etc., and hence in them pupils do not improve as they should.

than contact through all subjects for one term would;

c. By means of frequent conferences all teachers of a pupil may pool their knowledge of him.

23. A pupil is benefited by contact with the varying personal influences exerted by several teachers, since this is most like the influences of life.

IV. Concerning the curricula and courses of study

24. It makes possible the expansion and enrichment of the curriculum and courses of study.

25. It results in a greater degree of coherence and unity in the course of study for each subject.

26. It enables the supervisor or administrator to secure coherence and unity in the entire curriculum as well.

14. The pure departmentalist is a distinct hindrance to the construction of a rational curriculum.

15. In a departmental system of teaching the correlation of subjects is almost impossible.

One of the serious arguments against departmental teaching is that an individual pupil going from one teacher to another for recitations may not have sufficient personal attention. The evidence shows that this condition is likely to result, especially for a pupil who is not for some reason conspicuous, unless the departmental organization is supplemented by an adequate system of personal advisers. On the work of the advisers no less than on the administration of the principal, the success of the departmental organization seems to depend. Twenty-three, or 13.5 per cent of 170 schools replying on this item report a tendency in departmentalization to lose track of the pupil.

It has often been stated that one of the reasons why the

gap exists between the elementary and the high schools is that in the latter full departmental teaching is abruptly begun. If this abrupt change is bad at the end of the eighth grade, it must be worse if introduced two years earlier, at the beginning of the junior-high-school period. The cure for a bad condition would seem to be the gradual introduction of the desired or necessary departmental teaching, a beginning being made in the "special subjects" perhaps as early as the third grade, with an extension to the academic subjects in the seventh year. Full departmentalization is not likely to be necessary or wholly desirable before the ninth grade.

Many schools, when elementary or higher grades are housed with the intermediate grades, use departmental teachers to bind the lower and the higher units more closely

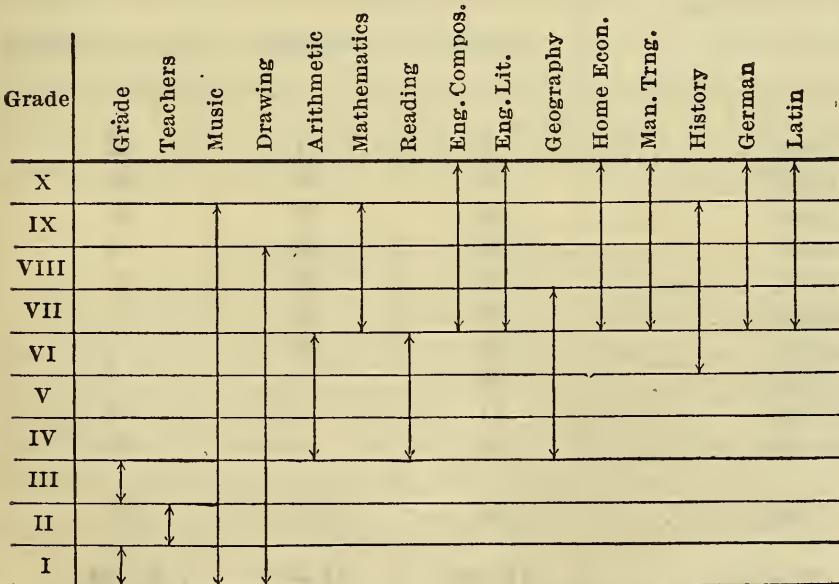


FIG. 2. SHOWING THE ASSIGNMENTS OF TEACHERS AT VINTON, IOWA.

together. An illustration of how this is effectual may be seen in the appended diagram, which shows the assignment of the teachers in the school at Vinton, Iowa.

From Table XX it may be seen that among the junior high schools which report on this topic, some form of departmentalization is very general. This table is to be read: "Of the 196 junior high schools reporting on this topic, 9 have from one to 10 per cent of their teachers teaching one subject; 17 have from 11-20 per cent teaching one

TABLE XX
SHOWING THE NUMBER OF JUNIOR HIGH SCHOOLS HAVING VARIOUS
PER CENTS OF THEIR STAFFS TEACHING ONE, TWO, OR MORE
SUBJECTS

Per cents	Teaching		
	One subject	Two subjects	Three or more subjects
1-10.....	9	17	22
11-20.....	17	36	16
21-30.....	32	37	21
31-40.....	29	29	9
41-50.....	26	32	12
51-60.....	16	14	11
61-70.....	13	13	7
71-80.....	30	15	6
81-90.....	11	6	2
91-100.....	13	8	21
Total.....	196	207	127
Median.....	41-50	31-40	31-40

subject, etc. . . . Of the 207 schools reporting, 17 have 1-10 per cent of their teachers teaching two subjects; etc." Although the figures in these columns are not comparable, because of the fact that the same number of principals did not answer all of the questions, they show clearly that the tendency is toward a large amount of departmental teaching.

Davis found that of the 285 junior high schools in the 17 States of the North Central Association, 97.26 per cent have some degree of departmental organization, and the Springfield Report found a similar percentage.

Of the 256 principals expressing a preference, 132, or 51.6 per cent, accept as ideal for grade 8 full departmentalization; while 124, or 48.4 per cent, prefer as an ideal partial departmentalization. The sharp difference in opinion is due largely, no doubt, to limited experience and to incomplete thinking on the elements involved. For the Springfield Report 66.2 per cent of the 74 principals replying prefer for the junior high school full departmentalization, 31.1 per cent prefer partial departmentalization, and two are uncertain.

B. INDIVIDUAL DIFFERENCES ¹

The scientific study of education has contributed nothing that has had more influence in modifying both the organization and the practice of schools than the facts of individual differences of pupils. Common observation has always noted some differences, but science has shown that at any given school grade or at any given age these differences have

¹ For an exposition of individual differences, with a bibliography to 1914, see Thorndike's *Educational Psychology*, vol. III.

an astounding range and that the distribution of degrees is in any large number of children practically always continuous and unimodal — in other words, that the farther we go

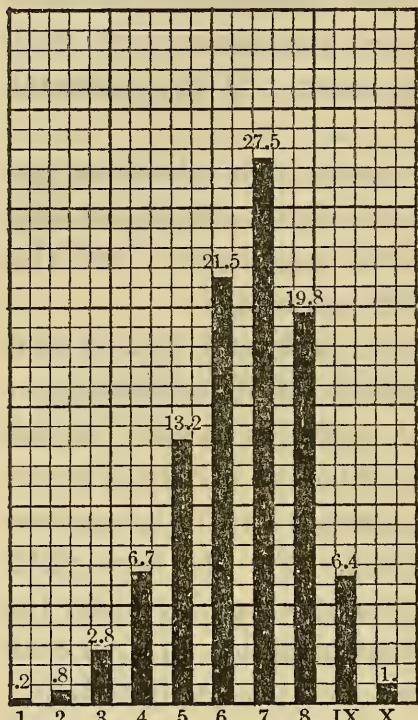


FIG. 3. DISTRIBUTION BY PER CENTS OF 13-YEAR-OLD PUPILS IN THE SCHOOLS OF SIX CITIES. (DATA FROM INGLIS.)

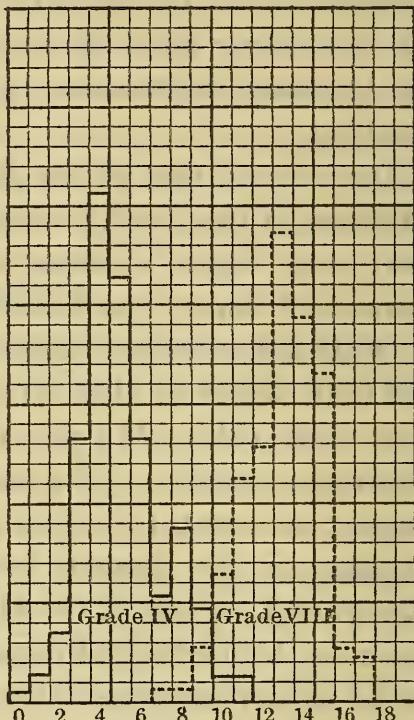


FIG. 4. NUMBER OF PROBLEMS IN ARITHMETIC CORRECTLY SOLVED BY PUPILS OF THE FOURTH (SOLID LINE) AND EIGHTH (DOTTED LINE) GRADES. (COURTIS.)

from the average of any trait or tendency, the fewer children we find. Science has also shown that there is a surprising overlapping of abilities and other characteristics from grade to grade or from age to age: for examples, thirteen-year-old children are found in every grade of some cities, from the kindergarten to the high school; there are in one grade pupils

who can spell better, work arithmetic better, and in general do better school work than the average in grades one, two, or even more years advanced; in any grade pupils differ greatly in their ability to do what they have been taught. The extent of individual differences of two kinds may be seen from Figures 3 and 4.

An analysis of individual differences at early adolescence shows that they are of many kinds — some due to nature and some to nurture. Briefly stated they are of race,¹ sex,² age,³ physical development,⁴ health, intellectual inheritance and training,⁵ interests, tastes, and aptitudes, environment, family traditions, social and economic status,⁶ aspirations, probable future schooling,⁷ and command of the English language. In these differences science has shown that there is a positive, though by no means perfect, correlation of desirable traits — that is, we are more likely to find good intellect with good health, for example, than we are to find a compensating relation.

¹ See Mayo: *The Mental Capacity of the American Negro*; Murdock: "A Study of Race Differences in New York City," *School and Society*, vol. 11, p. 147; Woodworth: "Racial Differences in Mental Traits," *Science*, vol. 31, p. 171.

² See annotated bibliographies by H. B. Thompson and L. S. Hollingworth in *Psychological Bulletin*, 1914, '16, '18, '20; Thompson: *Psychological Norms in Men and Women*; and Terman: *The Measurement of Intelligence*.

³ See any age-grade table in school reports, or Inglis: *Principles of Secondary Education*, p. 5.

⁴ Baldwin: Part 1 of the *Fifteenth Year-Book of the National Society for the Study of Education*; Inglis: *Principles of Secondary Education*, chap. 1; and Crampton: *American Physical Education Review*, vol. 13, pp. 141, 214, 268, and 345.

⁵ See Terman: *The Intelligence of School Children*.

⁶ Van Denburg: *Elimination of Students in Public Secondary Schools*.

⁷ Almost one and a half million children between the ages of ten and fifteen are listed in the 1910 census as farm laborers.

The ideal of the schools of a generation ago, and unfortunately of some even to-day, is by the same subjects and the same methods to make all pupils alike, with disastrous results, it is now generally recognized, to those who deviated markedly from the group especially benefited. By and large, the ablest pupils were retarded, and the poorer ones were fed a pabulum that did them less good than was possible while they remained in school and ultimately eliminated them from the number that received public-school training of any kind.

From a mere reading of the list of kinds of individual differences it is obvious that some may be eradicated by training, that some cannot be materially modified by any means, and that some may be reduced or removed at a cost unjustifiable to society. Observation of school programs and work reveals that several of the differences are likely to become greater with the oncoming of adolescence and the increased possibilities in the subject-matter offered, and that teachers are as a rule insufficiently informed of the differences due to conditions of inheritance and outside influences.

Because of the variations in policy, the following principles are proposed for the intermediate school: first, it should systematically seek to ascertain the nature and extent of individual differences of its pupils; second, it should definitely decide which of them from the point of view of public good it is reasonable to seek to reduce or destroy; third, it should adopt a definite policy as to providing education suitable to those differences which it cannot by any reasonable expenditure of effort and money hope to eradicate;

fourth, it should recognize that as a public school it owes to each pupil a similar amount of attention, regardless of differences of various kinds.

One of the most important functions of the intermediate school is, after recognizing differences that remain after six or more years of schooling, to reveal to the pupils possibilities of various higher activities and more or less at the same time to start each individual on a curriculum that promises to be of most value to him and consequently to society. It has previously been pointed out that both the congregation of a larger number than usual of pupils of the same ages and general interests, and also the lack of traditions, make it easier for the junior high school than for any other institution to provide for individual differences. The remainder of this section will present the means that have been provided by schools to accomplish ends which differences of nature or of nurture make desirable.¹

i. Differentiated curricula. Although the conception of a junior high school presented in chapter II would make completely differentiated curricula a part of the program only of senior high schools or of more advanced institutions, many junior high schools have offered in the seventh grade a choice of electives or else curricula that contain combinations of subjects leading toward diverse ends. When these are offered to pupils whose various kinds of differences are unknown to the junior high-school teachers, there can be no wise guidance; and elections by pupils who are not acquainted with the subjects offered or who are uncertain as

¹ See also T. S. Henry: *Classroom Problems in the Education of Gifted Children*, part II of the *Nineteenth Year-Book of the National Society for the Study of Education*.

to their futures usually result in choices that are influenced by factors other than the good of the individual or the profit of society. Two tendencies operate strongly under these conditions: one, to elect courses that are novel and "practical," and the other to elect those that have a social sanction. The result is that many pupils who should prepare for continued intellectual training choose the commercial, industrial arts, or agricultural curriculum, while others who by every evidence are likely soon to enter on gainful occupations choose the college preparatory curriculum so as to remain in an envied social group. The results of full or even wide differentiation in the seventh grade reinforce the arguments for exploratory courses and a gradual diminution of common, integrating education. Exception is again made of the over-age pupils who are certain to leave school at or soon after the end of the compulsory education period. Illustrative of the wide differences in electives are the percentages of choices by pupils at Los Angeles, California, and Somerville, Massachusetts, shown in Table XXI.

TABLE XXI

PER CENT OF PUPILS ELECTING SEVERAL CURRICULA AT
LOS ANGELES AND SOMERVILLE

<i>Curricula</i>	<i>Los Angeles</i>	<i>Somerville</i>
General.....	87.6	44
Commercial.....	10.0	40
Vocational.....	2.4	16

Ninety-three junior high schools provide curricula of which one third or more of the subjects are direct training for industrial work. Of 259 schools reporting to the New Jersey Council of Education ¹ 27 per cent offer some differ-

¹ Unpublished study.

entiation in grades 7 and 8; 24 per cent planned to offer some; and 32 per cent assert that they have real differentiation in curricula. Of the schools reporting in the North Central territory ¹ 25.25 per cent allowed election by curricula, and 48.46 per cent allowed election by subject.

2. Promotion. A means generally used ² to accommodate pupils who are uneven in their development is promotion by subject. This practice, which is almost universally approved in theory, has in its application the obstacle of requiring a program that makes it possible for each pupil to be placed in the class where he should be. Consequently there are many compromises, usually adjustments being made in the subjects that are not considered by the principal to be of great importance.

Double promotions are frequently used to effect a classification for bright pupils that are judged able to carry advanced work. Although this practice jumps children over the work of a whole semester or even of a year, it is reported to be effective in such cities as Hackensack, New Jersey, and Wellesville, New York. That it is so argues that the work skipped is not of great importance or, more probably, that the pupils get it up for themselves outside the school or in the class reviews. Fishback has shown ³ that in the elementary school pupils receiving double promotions have made quite as high marks afterward as they did before. Of 148 junior high schools reporting on this item, 125, or 84.5 per cent, use double promotions to place pupils where they can work most effectively.

¹ *School Review*, vol. 26, p. 328.

² See page 152 ff.

³ *Report of Superintendent*, Hackensack, 1917.

Irregular promotions are made in many schools — for instance, at Burlington (Vermont), Tacoma (Washington), Newton (Massachusetts), Lincoln (Nebraska), Solvay (New York), and in the junior high schools of Vermont — as pupils manifest ability to do advanced work. This practice promotes any pupil at any time when it seems that he may secure more profit from an advanced class than from the one in which he is. Of 409 cities, 262, or 64.1 per cent, reported to Smith ¹ that they use irregular promotions.

Often promotion *per vim* has been made of pupils who, because of absence, negligence of work due to other interests, or dislike of one or more teachers, had been marked as failures in the subjects studied. The stimulus from being in a more congenial environment not infrequently has caused such pupils to catch up with advanced classes and to make satisfactory marks. This result was reported at Newton, Massachusetts, and at Burlington, Vermont.

Occasionally irregular promotion into the junior high school has been of pupils who were dull, the hope being that association with boys and girls of similar age and subjects of greater interest would serve to hold such pupils in school longer and profit them more than the repetition of subjects from which they were receiving little. Commissioner Hillegas, of Vermont, reports: ²

In a number of cases we have been bold enough to promote stupid boys and girls from as low as the fifth grade directly into the junior high school. Results have been most satisfactory. In one of the larger junior high schools considerable groups of such re-

¹ *Proceedings of the Fifth Annual Conference on Educational Measurements*, Indiana University.

² *Teachers College Record*, vol. 19, p. 343, September, 1918.

tarded and incompetent boys and girls were thus promoted. At the beginning of the second year new teachers in the school were unable to select the pupils thus advanced.

Principal P. W. L. Cox reports similar results both at Solvay, New York, and at St. Louis, Missouri. At Lincoln, Nebraska, 97 of 225 retarded pupils were given trial promotions; of this number one failed because of lack of proper effort, but "all the teachers reported that the ninety-six were doing as well or better in the advanced grade than they would have done had they been kept in the grades where they were." On this topic, the Commission on the Reorganization of Secondary Education recommends ¹ "that secondary schools admit, and provide suitable instruction for, all pupils who are in any respect so mature that they would derive more benefit from the secondary school than from the elementary school."

These plans for irregular promotion are all intended to provide training most suitable to each pupil because of his individual differences. Whatever weaknesses there may be in the deviations from normal practice, they are certainly better than the old practice of retarding a bright pupil so that he receives less education than he should, and at the same time develops habits of indolence and mischief. They are better, too, than holding a pupil who is dull or a misfit for repetitions of such small value in surroundings so uncongenial that he leaves school at the first opportunity and enters on work and citizenship for which he is by no means prepared.

3. Tutoring. Special assistance is sometimes furnished

¹ United States Bureau of Education Bulletin 35, 1918.

to pupils who are being prepared for double promotion or to those who for one reason or another have fallen behind in their work. The old Batavia plan provided this assistance to all pupils in order to care for their individual differences and difficulties. This plan has been adopted by a number of junior high schools, though in the majority of cases for the dull rather than for the bright pupils. It has been in use at the Boyle Heights Intermediate School (Los Angeles), the Sigsbee School (Grand Rapids), the Condon School (Detroit), and in Rochester (New York).¹

Of 135 schools replying on this point, 107, or 80 per cent, report that they provide some tutoring for backward pupils. There is reason to suspect, however, that among the 107 are some that give this assistance merely during the supervised study periods.

There are four means for providing this special assistance: first, the regular classroom teacher helps pupils with their difficulties, either during a supervised study period or at a regular conference hour; second — a variation of the first — teachers excuse for one period a week those pupils who manifest superior ability, giving them supplementary assignments, and devote the period to further explanation and drill for those who need assistance; third, a "Batavia teacher" takes such pupils for extra work, as at Boyle Heights or the Horace Mann School for Boys; and, fourth, the ablest pupils are assigned as helpers to those who are in need of assistance. This plan, which was used for several years at the Speyer Junior High School, New York, is effective, for the following reasons: pupils are more willing to

¹ See *School Review*, vol. 28, p. 195.

reveal the fullness of their ignorance to their fellows than to teachers who have already attempted to present the subject and who hold the power of assigning marks; the helping pupil has the point of view of those in difficulty and usually can give sufficient time for making clear the points that cause trouble; it is an effective means of socializing the school; and, finally, it is of no inconsiderable value in clarifying and "stamping in" knowledge and skills for the pupils assigned as tutors.

4. Abnormal number of subjects. It has long been the practice, especially in schools that have promotion by subject, to permit the abler pupils to carry one or even two subjects more than the normal number, and to require the weaker to take one or two fewer. This plan is in sharp contrast to the other, which is unfortunately also common, stated by a junior-high-school principal as follows, "The failing pupil must in the following semester take the normal program and in addition the subject or subjects in which he has failed." Unpublished studies show that bright and industrious pupils can carry such extra load with no material reduction in marks, and that the dull or lazy pupils, unless they receive careful individual attention, do scarcely better with a lighter program than they did with the normal amount of work.

For many years the State of New York has encouraged an element of junior-high-school work in that it permitted the abler pupils in the eighth grade to take one or two secondary-school subjects. Clinton, Iowa, has allowed bright pupils in its junior high school who have completed the seventh grade to substitute Latin for English grammar

and algebra for arithmetic. And many cities — among them Grand Rapids, Cincinnati, Butte, Paducah, Evansville, Chanute, Santa Rosa, and Burlington — have adjusted the size of junior-high-school pupils' programs according to their abilities. It is, according to Smith,¹ the second most common means of providing for individual differences.

Of 198 junior high schools replying on this topic, 183, or 92.4 per cent, permit the abler pupils to take one or two additional subjects, and 180, or 91.0 per cent, require failing pupils to take a program lighter than the normal.

5. Credit for outside work. Many pupils in junior high schools supplement their regular studies by work with private teachers, and in evening or summer schools. Outside study of music is most common; and when there are carefully prepared courses of study, supervision, and an examination by the school, there is no good reason why a limited amount of credit toward graduation should not be granted for it. Several schools report that such a plan has worked satisfactorily. A few schools give credit for similarly controlled outside study of the Bible. Evening-school study at the same time that pupils attend day school seems unreasonable, and is reported by a negligible number of cities. Summer schools, supplementing the work of the regular session, is reported by Smith² as the most popular means of providing for individual pupils an opportunity to make up failed subjects or to advance more rapidly than would otherwise be possible. Summer schools have usually been established to afford an opportunity for pupils to make up work

¹ *Proceedings of the Fifth Annual Conference on Educational Measurements.* Indiana University.

² *Loc. cit.*

in which they have failed, but it is not unusual to find the enrollment largely made up of the able who are ambitious to accelerate their progress through school. Briggs reports ¹ that at Los Angeles intermediate-school pupils elect and receive credit for more summer-school courses than do pupils from corresponding grades of the older organization.

Of 409 schools reporting to Smith on this topic, 141, or 34.5 per cent, give credit for outside work, while only 67, or 16.4 per cent, give credit for evening-school courses; 207, or 66 per cent, offer and give credit for summer-school courses. Of 177 junior high schools reporting for this study, 53, or 30 per cent, give credit for outside vocational work. It is probable that many others would do so if a request were made.

6. Extra hours. The brevity of the school day in many schools makes it possible for pupils to do extra work either early in the morning or after adjournment in the afternoon. It is probable that some schools provide opportunity for additional periods of study and instruction for backward pupils, but none such have been reported. Oakland, California, however, for several years offered for ambitious pupils foreign language and commercial courses before the regular school work began in the morning. Superintendent Barker reported the plan successful both educationally and economically. The University of California School ² is open from 8 A.M. to 5 P.M. "to afford opportunities for pupils who are behind to catch up in their work, or for those who so desire to take extra work."

¹ *Journal of Educational Research*, November, 1920.

² *Journal of Educational Psychology*, vol. 5, p. 481.

7. Credit for quality. The movement to assign credits weighted according to the quality of work done has naturally spread to the junior high schools that are attempting by every means possible to provide for individual differences. Hampton, Iowa, and the Sigsbee School, Grand Rapids, are among those that have adopted the plan. Vermont junior high schools assign ¹ 15 per cent and 25 per cent more or less credit respectively for the two marks above and below the average for the class.

In order that credit for quality may be most successfully administered it is necessary that careful definition be made of the work required for each mark.² Those who have used the plan report that it is more effective in stimulating the weak pupils than the able and that it does not enable the brightest pupils materially to reduce the time necessary for graduation.

Only 91 junior high schools reported as to credit for quality. Of these, 40, or 44.0 per cent, use the plan to provide for individual differences of achievement.

8. Minimum essentials. One school reports that it requires of all pupils a minimum amount of work in each subject and requires of the abler pupils supplementary or more difficult topics. This plan has not proved popular and is not likely to be successful, for, as McMurry has pointed out, minimum essentials are often conceived also as the maximum necessities, and it constantly widens the gap between

¹ Bulletin 1, 1918, pp. 23-26.

² See Bailey: "Administration of Quantitative and Qualitative Credit for High School," *School Review*, vol. 25, pp. 305-22; and Reeder: "The Geneseo Scale of Qualities," *Elementary School Journal*, vol. 20, pp. 292-96.

the able and the dull in the same classes. For these reasons, among others, it was abandoned after a trial in elementary schools of New York City. It would seem wiser to provide for individual differences by some of the other plans enumerated in this chapter.

9. Homogeneous grouping of pupils. There has always been a tendency for schools to recognize and care for, often unkindly, pupils who are dull or for other reasons backward. Teachers have given such pupils a relatively inordinate amount of time in class and have kept them in after school, and in one high school visited there was what was popularly called a "bonehead room" to which were assigned pupils who had fallen behind in their work! The plan of homogeneous grouping provides that the bright be recognized as well as the dull, that each group be taught according to need, and that it shall progress at its optimum pace.¹ That there are wide ranges of natural ability, all stages of which should receive special and appropriate attention, may be seen in the reports of the achievements of pupils when measured by the Army Alpha Tests.² In Grand Rapids 44 dull junior-high-school pupils, when given individual mental tests, were classified as follows: normal, 2; backward, 3; border-line, 1; morons, 36; and imbeciles, 2.³

Various methods have been used to ascertain the relative abilities of pupils. One school selected a group of accelerant pupils wholly on the basis of inheritance and "general repu-

¹ A full explanation of this plan, with notes as to its administration, is given by Briggs in the *Proceedings of the National Association of Secondary School Principals*, vol. III, pp. 53-63.

² See Madsen and Sylvester: *School and Society*, vol. 10, p. 407.

³ *Superintendent's Report*, 1916.

tation" and reported the results "encouraging"; Rochester (Minnesota), Butte (Montana), Madisonville (Ohio), Lincoln (Nebraska),¹ and Pawhuska (Oklahoma), among others, have grouped pupils on the basis of their records in elementary grades; Hot Springs (Arkansas), Richmond (Indiana), and Burlington (Vermont) have made their groupings after from three weeks to one semester of teaching and observing the pupils; Cincinnati selected a class of accelerant pupils by individual mental tests, and at the Speyer Junior High School, New York City, different batteries of mental tests have been used to classify all incoming pupils since 1915. Fretwell has shown² that the marks of pupils in grades 5 and 6 are good for prognosis of ability to do junior-high-school work, that the marks for grades 1 to 6 are better, and that selected tests are best. The improvement in group mental tests, which are easy and economical to administer, and their popularization by the army have given impetus to the movement for their use for homogeneous classification of school pupils.

Whatever method of classification is used, there should be provision for the easy transfer of pupils who have been badly placed. Superintendent Chittenden states that a pupil transferred from one group to another adjusts himself within forty-eight hours; but experience at the Speyer School showed that there was considerable loss when transfers of individuals were made. To be most successful homogeneous grouping needs to be supplemented by more than usually close and careful supervision of teachers; although

¹ Hunter: *Educational Administration and Supervision*, vol. 3, pp. 394-95.

² *A Study of Educational Prognosis*.

they may understand and generally approve the classification of similar pupils together, there are potent habits to be overcome, and long confidence in subjective judgments of ability tends to make them dubious at times of the results of objective measures.

After pupils are grouped according to ability, schools vary in their aims and prescribed programs. The Speyer School, Richmond, and Burlington plan primarily for pupils to save time. Cincinnati and Lincoln provide a special curriculum, for the most part academic, whereby their better groups may be accelerated. Hampton, Iowa, has its A division supplement the text fully, its B division do the work as outlined in the courses of study, and its C division emphasize only what are considered to be minimum essentials. Miami reports:

In the A division of each year we make the work more literary and require more outside work than in the B or C division; in the B division we offer more manual training and domestic science and less work of a literary character; and in the C division we prescribe still less work of an academic nature but give as much practical arts as possible.

An adjustment of methods of teaching automatically and almost inevitably follows homogeneous grouping.

Of 109 junior high schools reporting on the topic, 80, or 73.6 per cent, provided in 1917-18 for accelerant groups; and of 140, 110, or 79.3 per cent, provided for the slow moving. There is evidence that the number is by this time considerably increased. There is no report of a school that has once tried the plan reverting to the old classification of pupils regardless of their ability to achieve results.

10. Ungraded rooms. Another method of providing for individual differences is the assignment, usually in small groups, of pupils who deviate markedly from the normal groups to a special room where they may receive suitable attention. Like several of the other provisions, this one is usually made for dull pupils, though there is no reason why it should not be equally effective for the able. Only 13.9 per cent of Smith's 409 cities provide ungraded rooms for bright pupils. "Opportunity rooms" are found in junior high schools at Los Angeles, Grand Rapids, Detroit, and Charleston (West Virginia). No questionnaire returns were requested on this item.

Of the work at Charleston Miss Mabel Gibbons, the principal, wrote:

At the opening of the second semester we formed special classes of pupils who failed to pass in their work and yet who were too far advanced to repeat without an unnecessary loss of time and interest. . . . These classes were given a review of six weeks on the work of the previous semester, particular attention being paid to the individual needs of the pupils. New supplementary work was introduced to keep up the interest and to furnish new avenues of approach. At the close of this six weeks period those who were strengthened sufficiently were allowed to take advanced work under the same teacher, and the others were fitted into lower classes for more thorough study. Very few returned to the lower classes. At the close of the term about 80 per cent of those in repeating classes were ready for regular promotion and we find them doing good work this year. Some of the weak 20 per cent made up the work during the summer, and others are repeating in regular classes this semester.

11. Sex segregation.¹ The separation of pupils according to sex in secondary schools has never been generally consid-

¹ See also Douglass: *The Junior High School*, pp. 44-45, 49, 130-31.

ered from an educational point of view. As it is more economical to establish one high school in a district, boys and girls have been thrown together for education in adolescence as in childhood, with such satisfactory results that challenges to the practice have been few and ineffective. But there are differences between boys and girls that are recognized by the provision of separate classes almost everywhere, at least in physical training and industrial work.

It is held by many that sex segregation by classes in early adolescence should be carried much further than is now the general practice in secondary schools. As the consciousness of sex becomes strong, there are increased problems in co-education, especially in those subjects that involve emotional elements — like literature and music. There is much testimony that junior-high-school boys and girls respond more freely and naturally to emotional appeals in literature and that they sing more seriously and better when separated than when together. Discipline is also said to be easier. Science has shown that girls enter upon adolescence earlier than boys, but the effect of this upon classwork is by no means exactly known.

Many schools have carried sex segregation by subjects further than is usual, holding that textbooks, especially in science and mathematics, are prepared primarily for boys. Lewiston (Idaho), Clinton (Iowa), and Everett (Washington), are among the schools that have taken this position, and it was approved in 1914 by the New Jersey Council of Education. Of 254 junior high schools reporting, 67 have sex segregation in subjects other than physical training and industrial work. The distribution is as shown in Table XXII.

TABLE XXII

DISTRIBUTION OF SUBJECTS IN WHICH PUPILS ARE SEGREGATED ACCORDING TO SEX, EXCLUSIVE OF PHYSICAL TRAINING AND INDUSTRIAL WORK, IN 67 JUNIOR HIGH SCHOOLS

Subject	Number	Per cent
All	17	25.4
Some	3	4.5
English	13	19.4
Latin	1	1.5
Music	7	10.4
Art	6	9.0
Social sciences	5	7.5
Physical sciences	29	43.3
Mathematics	11	16.4
First aid	1	1.5
Care of children	1	1.5
Earning, saving, and spending	1	1.5

In a few cases where for educational reasons the sexes are separated in physical training, industrial arts, and the like, difficulties in program-making keep them apart in other subjects as well. On the other hand, small classes sometimes make it necessary to teach boys and girls together, although educationally it seems desirable to segregate them.

This discussion has shown that junior high schools to an extent, certainly more than other institutions dealing with pupils of the same ages, are recognizing and providing in several ways for individual differences. It seems likely that as the facts and possible means are more widely known, there will be a steady increase in the number of schools making these provisions and in the effectiveness of the work.

C. PROMOTIONS

From an academic point of view, departmentalization makes promotion of pupils into higher class organizations

less important than when a pupil must "remain behind" or "go up" with his room. But in most schools where inquiry was made, the pupils themselves are keen to be known as members of the next higher school class, for there are usually some organizations — social, athletic, and the like — that are delimited as to membership by the general standing of the pupils. Some schools, therefore, as Richmond, Indiana, have a regular schedule of points that a pupil must acquire to earn membership in each of the class organizations.

In proportion as a school has accepted the welfare of the individual as its ideal, rather than a strict "upholding of standards," promotion has, as stated from Sioux Falls, North Dakota, "a great deal of elasticity." It is notable, on visiting junior high schools, that a considerable number of principals are ready to promote a pupil to any class whatever if it seems probable that for any reason he will be better off attempting the so-called "higher" work. In many cases the work may be "higher" only in the sense that it is scheduled in the program of studies normally for the eighth or ninth grade. Mention has already been made of the practice of promoting *per vim* backward pupils, especially when they are approaching the end of the period of legally compulsory education. More than 23 per cent of 260 junior-high-school principals report that they promote pupils at any time that conditions seem to warrant their so doing. These reports were volunteered, no direct request for such information being made; therefore it is probable that the percentage is in reality much larger.

Throughout the country the tendency toward semi-annual promotions in all grades is marked; in fact, it may

be considered the very general practice in schools that are large enough to have two or more classes doing the same year's work. It is somewhat surprising, then, to find that 47 per cent of the 260 junior high schools reporting on this item still had in 1917 annual promotions only. The Springfield Report found 54.9 per cent of 83 schools with annual promotions in 1919. The explanation is, of course, that the larger the number of elective subjects offered in a school, the more impossible it is to provide for semi-annual promotion; an attempt to provide differentiation is the most marked characteristic of junior high schools.

Surprising, too, is the fact that only 76.6 per cent of 248 schools reporting promote by subject rather than by grade. This does not differ far from the 82.3 per cent of the North Central junior high schools reported by Davis as promoting by subject. Ten per cent of our 248 schools state that they promote by subject in the ninth grade only or in "both grade and subject." This latter phrase may mean promotion by subject in the ninth grade only, or in subjects that have more definite standards than are now found in music, physical education, etc. Of the schools reporting for the Springfield study in 1919, 42 promote entirely by subject, 10 by the general average of subjects, 18 by major subjects, and 17 by the credit point system. These answers are returned by a maximum of 83 schools. The difficulties of program-making are the greatest obstacles to the ideal of promotion by subject.

CHAPTER VI

CURRICULA AND COURSES OF STUDY

ALTHOUGH in the beginning of the junior-high-school movement the energies of schoolmen were given largely to the physical details of reorganization, it has all the time been obvious that the new type of school could achieve only a limited amount of success unless it brought about adequate changes in the curricula and courses of study.¹ To be satisfactory these changes must be based on clearly conceived purposes; but as an effective definition of the ends of education itself is still in the making, there can be small wonder at the meagerness of the changes so far accomplished in the subject-matter for early adolescents or at the great variety in the attempted adjustments. One cannot examine the curricula and courses of study without concluding that so far they have made only a beginning at accomplishing desired ends. This opinion is confirmed by one of the foremost advocates of educational reorganization:

We have lately visited a good number of so-called "Junior High Schools." We find in all cases the principal proudly conscious of the distinctiveness of his new institution, his teachers, pupils, building, discipline activities, student activities, "auditorium,"

¹ Throughout this report these terms are used as recommended by the Committee on College Entrance Requirements. "*The program of studies* properly includes all the subjects offered in a given school. *The curriculum* refers to a group of subjects systematically arranged for any pupil or set of pupils. *The course of study* means the quantity, quality, and method of work in any given subject of instruction." Johnston: *High School Education*, p. 111, note.

adviser system, social center, etc. We have proceeded as quickly as politeness allowed, in every case, to make inquiries concerning the designs for the partially distinguishable schemes of training (courses of study), the bases upon which pupil groups are steered into this or that curriculum direction, the methods of teaching which seem best suitable to this new unit in the school system — and finally (and most vital and most perplexing of all the questions), what are the new organizations of the mathematical material, the language units of instruction, the bases for the selection and treatment of the literature, the foreign languages, science, history, etc., which are being adopted. The answer generally is, "We have n't got that far yet," "We plan to take that up next year," or, "We have no reorganization of this sort in prospect."

If we are really going to reorganize our school system into new administrative units, it will be a great pity, educationally, if we merely do a little tinkering here and there — in spots, as it were. The psychological value of the new development is that it provides just that favorable new condition for seriously conceived plans which are more closely related to a clear educational philosophy, and which may be undertaken, less hampered by tradition and prejudice, than ever before. If we for the first year or two tackle merely the externals of reorganization and put off the strictly internal matters of reorganization suggested above, the opportunity for new and profound educational effects is squandered.¹

Why have schoolmen postponed the issue? Is it because the concrete details of administration are too insistent to leave time for the task? Is it because tradition is so potent as to make effort seem unnecessary? Or is the acceptance of a "manipulative and clerical," rather than a "discriminating and educational," method of curriculum making a confession of the lack of clear and convincing guiding principles? Although there have been relatively few attempts fundamentally to reorganize subject-matter, there is by and large among junior-high-school principals and teachers a

¹ C. H. Johnston, editorial in *Educational Administration and Supervision*, vol. 1, pp. 411-12.

keener interest in such reorganization than among the representatives of higher schools. This interest results in a receptivity that throws on theorists and their interpreters, the makers of textbooks, the gravest responsibilities for the subject-matter and method in the intermediate period for the next generation.

The purposes of education. In all literature concerning education there are numerous attempts to define purposes. These are so many and so varied in their emphasis as to suggest that each person must find or formulate a statement of peculiar value to himself; unless the statement stimulates and guides him in the task of leading others toward "the good life," it is merely an academic exercise and without efficacy. The most generally helpful statement, like the Golden Rule for moral conduct, will not restrict initiative and individuality by undue detail, but will rather guide by large principles, throwing on each individual the burden of responsibility for interpretation and for action.

In this treatment of curricula the general purposes of the school are conceived to be two: first and fundamental, *to teach pupils to do better the desirable activities that they will perform anyway*; and, second, *to reveal higher types of activities and to make these both desired and to an extent possible*. Approval of the first purpose necessitates the making for each individual pupil or group of pupils of an inventory of desirable and inevitable activities; from this list selection must from time to time be made on the basis of relative importance. The second purpose, which is to insure growth beyond what instincts and education outside the school may furnish, demands not only that higher activi-

ties shall be revealed, but that they shall be made desirable and, so far as time permits, reasonably possible.

It is not urged that these or any similar principles be applied in such manner as to result in revolutionary changes — for example, in the discarding of the conventional subjects of study for an extreme problem method; but to insure the elimination of details justified only by tradition, the logical organization of the topic, or unsubstantiated ideas concerning the general transfer of powers, it seems entirely necessary that all subject-matter be tested by such accepted principles. In other words, as Flexner has said,¹ the modern school should "include nothing for which an affirmative case cannot now be made out."

Another general statement of the purposes of education is that by the Reviewing Committee of the National Educational Association Commission on the Reorganization of Secondary Education.² After a consideration of the changes that have come in society, in the secondary-school population, and in educational theory — specifically as concern individual differences, general discipline, applied knowledge, and the continuity of development of children — it proposes that as

the purpose of education in a democracy is so to organize society that each member may develop his personality primarily through activities designed for the well-being of his fellow-members and of society as a whole, *education in a democracy, both within and without the school, should develop in each individual the knowledge, interests, ideals, habits, and powers, whereby he will find his place and use that place to shape both himself and society toward ever nobler ends.*

¹ *The Modern School.*

² United States Bureau of Education Bulletin 35, 1918.

The report then sets up as the main objections of education —

1. Health.
2. Command of the fundamental processes.
3. Worthy home-membership.
4. Vocation.
5. Citizenship.
6. The worthy use of leisure.
7. Ethical character.

It later argues for the definite recognition of such objectives in planning curricula, both the differentiating and integrating functions, education as a process of growth, the need for explicit values, and the subordination of deferred values.

Variety and continuity. The details for study, selected on the basis of some general statement of the purposes of education, will fall roughly, but less severely than is now often required, into organization around conventional subjects, thus giving the material for courses of study, from which curricula may be made. The purposes presented go further in determining what details are worthy than in selecting among them those that are relatively of most worth. In one sense a curriculum cannot be intelligently formulated until the details of the constituent courses are fairly well known; and, on the other hand, the details of courses are in a measure determined by what supporting courses are offered — that is, by the whole curriculum. One's estimation of the value of "English," for instance, or of any other subject, will be determined partly by the details referred to general principles and partly as satisfying the needs for some specific, definite, and worthy end.

The details of a curriculum should promise an assured contribution to the limited life-aim selected; they should also in combination afford preparation for a well-rounded life. As pointed out by students, each person is a member of social units of various size; he follows a trade or profession; and he lives his individual intellectual and æsthetic life. That he may be guided and enabled to live a life of fullness, a variety of subjects must make their contribution to his education. Whenever the junior high school makes a program of immediate trade preparation alone, it acknowledges a compromise with its ideals — a compromise that may be necessary in order to restrain the pupil from prematurely entering work that must on the whole be profitless, but it is an admission that the school is not offering what it believes generally desirable — preparation for a life of many phases. Hence the general acceptance in curriculum-making of the principle of *variety*.

Another important principle is that of *continuity*. There has been much discussion as to the freedom a pupil should have in changing his election of curriculum. One perplexed principal sent in this inquiry: "How long should a pupil be compelled to continue a subject after it becomes evident that he cannot learn it?" Practice differs considerably. For the most part, change is permitted in junior high schools rather freely, with the result that undoubtedly some pupils drop an elected study merely because it proves difficult. If a curriculum is made up of mere fragments of work, there can be little promise of satisfactory educational results. The ideal would seem to require exploratory courses worth while to the extent taken, followed by continued and in-

creasing differentiation, as appropriate to individual needs as possible.

No one advocates the absurdly small unit of one week for any given subject; how long it should continue to be profitable is one of the unsettled problems. The answer will depend, of course, in large measure on the nature of the unit and on its relation to a proposed hierarchy, all the elements leading definitely to desired ends. Many schools prescribe that no credit shall be given toward graduation for a study of a foreign language unless it is pursued for one or for two full years. As the languages are ordinarily taught, this admission that no compensatory value results from a few weeks or months of study, is probably a justification for the prescription. But we can conceive of a material reorganization of subject-matter and of method that will result in a course, even in a foreign language, that is profitable whether continued for two years, two months, or even two weeks.

In a school that is frankly exploratory in purpose for pupils of uncertain aims it is difficult to discard the ideal of substituting assured values in every unit, however small, for a program of deferred values that may be realized only by a course continued longer than a majority of the pupils are likely to remain in school. If this ideal is earnestly sought and the resultant plans sensibly administered, there should be many small dividends, greater certitude as to what an individual pupil should or should not continue, and the possibility of a more justifiable demand for continuity in advanced work.

These two principles, then — that a curriculum by variety

of offering should prepare for a rounded life and that every unit should have either a considerable continuity or assured value in its smallest units — determine very largely the selection of subject-matter justified by the two general theses stated on page 157.

The purposes of an intermediate school. The application to the intermediate-school curricula of the general principles previously stated must be made in terms of the purposes of this period of education. The first of these purposes, which were briefly stated in chapter 1, is to continue, in so far as it may seem wise and possible, and in a gradually decreasing degree, common, integrating education. It is probable that even in the best schools there will remain after the sixth grade many details which, because of the generous conception as to what all citizens should know or because of the immaturity of the pupils, have not been taught. These, when presented in the seventh, eighth, or even more advanced grades, continue the integrating effect of education and also result in the desirable gradual change toward complete differentiation. It is quite possible that the amount of this common, integrating education should be determined by the holding power of the school; however profitable a curriculum may be to the children remaining in school, it has not made its maximum contribution to society unless it serves both to hold longer the large number who leave as soon as permitted by law and to profit them also. When the compulsory-education laws are changed so as generally to hold pupils until they are sixteen or eighteen years of age, the whole question as to the amount of common, integrating education may be opened anew; but until that

time we must formulate our programs in accordance with the facts of elimination and retention.

It must not be thought that this first purpose of the intermediate school is achieved only by the ordinary curricula matter, such as mathematics, civics, or English; toward it contributions are made also by extra-curricula activities, such as school assemblies, clubs, and pupil organizations for participation in the government of the school, all of which are steadily receiving increased recognition, and in addition by association in the same school of children having widely different origins and aims, but making and sharing in a common atmosphere with its traditions of prejudices and ideals. The economic values of early differentiating schools preparing for academic, industrial, or commercial life, must be great indeed to justify the loss of social integration in the common school.

The second purpose of the intermediate school, as stated, is to ascertain and reasonably to satisfy pupils' important immediate and assured future needs. Many of these, especially the immediate needs, are common to all early adolescents, and so their satisfaction also contributes to the first purpose. Many others, both the immediate and especially the future, are because of individual differences of various kinds not common. It is assumed that such differences as are undesirable and as can be removed at a justifiable cost to society will be eradicated. But there remain other differences — in mental capacities, in age, in economic status, and in family traditions toward education. Because it is beyond the power of the school to affect these latter differences, it is necessary to provide differentiated training, and this

can wisely be done only after a serious effort has been made to ascertain what differences, especially in interests, aptitudes, and capacities, exist and necessitate different direction or training. The effort to make all pupils alike, which has been too common in our traditional schools, has resulted not only in eliminations, but frequently also in unsatisfactory training of those for whom the curriculum and courses primarily were prepared.

Acceptance of the obligation to prepare for the important immediate and assured future needs of individuals may necessitate the earlier introduction of certain courses than would be approved if the schools had assurance of later opportunity. In the Bloom Junior High School of Cincinnati, the pupils of which as a rule remain only through the ninth grade, there is offered a course in the care of infants. A trained nurse and a kindergartner coöperate in teaching the girls how to bathe, dress, feed, entertain, and generally care for children from birth to the time they enter school. Although many of these girls are "little mothers" to small brothers and sisters at home, it may be admitted that such a course would be better if offered later, shortly before maternity; but no agency exists either for presenting such a course at that time or for compelling attendance. Therefore it is felt that social welfare justifies the junior high school in undertaking the task. The results are reported to be satisfactory.

What the important immediate and assured future needs of pupils are may be discovered only after a careful and continued study of local conditions, the intentions of pupils, and the histories of older people who have developed in similar surroundings. That they may not be known with full-

ness and accuracy is no excuse for the school's not attempting to ascertain and satisfy them as nearly as possible. Approximation is better than a continuance of training that is known not to satisfy either immediate or future needs of the large majority of pupils. Certainly the opportunities of children in congested districts of a great city and to a large extent their needs are different from those of other boys and girls in suburban or rural homes. One metropolitan junior high school has thought it wise by means of weekly excursions to reveal to its pupils the possibilities for popular education provided in museums, aquaria, art institutes, memorials, and public works, utilizing these excursions to stimulate and vivify the study of science, fine arts, history, civics, and English. A rural school might adopt the same general plan, but it would find it necessary to substitute other institutions, not merely because they are accessible, but because they are the ones that in all probability will most affect the future lives of most of its pupils.

When an intermediate school accepts the principle that its first obligation is to prepare better citizens for the political unit that makes local education possible, it will cease copying curricula and courses of study prepared for very different conditions or "for schools in general." On the basis of the suggested study of local needs and opportunities it will construct programs, if not for individual pupils, then for groups or majorities. It may be conceded, however, that peculiar local needs will necessitate adaptations more often than entire invention and that the changes will constitute as a rule only a minor part of the whole curriculum.

The third purpose of the intermediate school is to explore,

by means of material in itself worth while, the interests, aptitudes, and capacities of pupils. This purpose, like the second, is based on a recognition of insuperable differences that become of increasing importance as pupils approach the age of leaving school. It is true that to an extent interests are or may be created by the school, but even more they are the result of innate factors and of outside environment. Aptitudes and capacities, which are almost entirely innate, have a great range. These can be made identical, if at all, only at an unjustifiable cost to individual pupils or to the public. The wasteful effort to make scholars of pupils who have aptitudes for mechanics, or to give a professional training to those who inherit a capacity for doing well only those tasks that may be satisfactorily performed by limited intelligences, has been abundantly seen in the past. Not only has it largely failed to make boys and girls do well what they were unfitted by nature to do, but it has prevented those who were fitted from getting anything like the maximum benefit from their studies. Hence it is that the American high school is justly criticized severely when its product is compared with that of certain European secondary schools that segregate their pupils and prepare them according to their capacities. Although we are properly unwilling to predestine children because of the fortunes of economic or social status, there is nothing in the principles of democracy that forbids us to make provisions in education according to the predestinations of nature. Only by providing at adolescence for differences in interests, aptitudes, and capacities can we hope to give an "equal" chance to all future citizens.

As there are no means of knowing with any degree of accuracy the differences of children in interests, aptitudes, and capacities at the end of the elementary-school period, it is argued that it is an essential function of the intermediate school to ascertain what these differences are, so that advanced schooling may offer training adapted to them. The old type of secondary school did this in a very limited way, offering a program of studies which showed, by the failures, the eliminations, and the neglect after graduation, that it was unsuited to a large percentage of pupils. In other words, its success was largely in negative results. The purpose of the new type of secondary school is positive: to ascertain what is suited, not what is unsuited, to individual pupils.

This purpose necessitates a much wider variety of offerings, primarily in "general" courses, than the traditional program of studies provides, and it proposes to begin its study of differences earlier and more deliberately. More than this, it demands that the material for exploration so far as possible be justified for other ends of education. Although this demand would ultimately result in a general reorganization of courses of study, it is based on an ideal that may be measurably met by emphasizing in the junior high school the elements that are justifiable by some of the other accepted purposes, by omitting those that are not, and by making a careful record of the results with each individual pupil so that he may be given intelligent guidance for the future.

The intermediate school courses should explore the interests, aptitudes, and capacities of pupils in all the more im-

portant fields of learning, which include industrial activities. The following argument¹ for positive exploration in the field of manual arts, which is quoted from an article by a superintendent who has developed one of the most effective junior high schools, is just as sound when applied to the field of belles-lettres:

But how are these interests and abilities to be determined? It is true that every eighth-grade teacher has watched certain of her graduates go into the literary, pure science, and mathematics courses of the high school knowing that they were doomed to failure in these lines. Her counsels availed little, however, when opposed by the traditional emphasis upon those high-school courses which may lead ultimately into professional life. But even in these cases the teacher has based her judgment more upon what the pupil has failed to do in courses given than upon what he had accomplished in other directions. This is obviously true because the grammar school has no facilities with which to make any adequate test along lines other than those which do lead to the general courses of the upper high school.

School authorities in Rochester believed that so long as these broader facilities for evoking the pupils' interests and abilities in the great field of manual arts were not made a reasonably adequate part of their lives before the compulsory education law had been satisfied, the steady withdrawal of such a large percentage of the eighth-grade graduates from this community and the traditional selection of the literary high-school courses on the part of so many others who would gain but meager profit from such courses would inevitably continue. The only way to guarantee these facilities was to make them a part of the pupils' school work before compulsory attendance had released its hold upon the child. The problem then lay in preserving a sensible balance between the one extreme represented by the single-teacher plan of grammar-school organization and the other extreme of premature specialization. This could be done only by insistence that these courses for seventh- and eighth-grade pupils under the junior-high-school organization

¹ Weet: "Rochester's Junior High Schools," *Educational Administration and Supervision*, vol. 2, pp. 437-38.

should provide so far as possible a range of activities sufficiently broad to bring out individual interest and capacities and that they should be emphatically preparatory and prevocational.

The fourth purpose of the intermediate school is to reveal to pupils, by material otherwise justifiable, the possibilities in the major fields of learning. The high school has for a long time attempted something of this kind in such subjects as Latin and mathematics; but it has used for this purpose material of most value only if the subjects were continued to advanced stages. In other words, the high school has emphasized deferred values, and in so doing has contributed far less than it might to the pupils who were eliminated or who transferred to other curricula. The intermediate school proposes to open up to pupils somewhat earlier the possibilities in higher education, so that each pupil may intelligently elect those subjects which attract his interests, for which he has aptitudes and abilities, and which while promising to satisfy clearly perceived needs stimulate his ambitions. It is believed that most, if not all subjects, can reveal their possibilities by means of material that will at the same time contribute to some of the other enumerated purposes, with no loss to themselves and with assured values to the pupils who drop out no less than to those who continue.

How will the exploratory courses differ from those offered at present? In the first place, every detail will in itself be a fact worth knowing; nothing, absolutely nothing, at this period of a child's training will depend for its justification wholly or even largely on its deferred values. While being thus of worth, the facts presented will reveal the possibilities in the general field of learning. This means, of course, that they will cover a larger part of each field than now, that the work will for the most part be extensive rather than intensive. In literature the pupils will be

led to read widely, beginning with what they really like and proceeding to more refined masterpieces only as growing tastes, manifested by responses, will permit. Instead of learning fifty facts apparently of more or less equal importance about one classic, they will be led primarily to appreciate the one big fact in each of twenty classics. If they advance to a higher study of literature, they will have a background for their future study and a method of relative values; if they do not, they will have a background for their future reading and a method that should make it intelligent.

Mathematics, instead of being confined to the higher reaches of arithmetic, will concern the general applications of arithmetic, and will introduce the elements, the more practical elements, of algebra, constructive geometry, and even of trigonometry. In science — general science, if you please — the range for children will be like the range for real scientists, into whatever fields the solution of real problems leads. The artificial vertical stratification of science into chemistry, physics, botany, and the rest has its chief value in the logical organization of facts *after* they have been acquired. Early adolescence is the age for acquiring the facts of science and the simple principles which, while useful in themselves, reveal the possibilities in future study. Acquired matured knowledge frequently overlooks the earlier naïve questions, which demand honest answers as the foundation for the desired progress to the later ones.

Omitting the illustrations from the fields of English composition, fine arts, music, and industrial training, we may quote in conclusion general reasons for the exploratory courses:

This exploration, then, gives each pupil some knowledge of the general field more exhaustively studied in higher courses, and thus enables him to choose more wisely his future curriculum. Our system of electives in the senior high school and in college presupposes an intelligent and informed elector; under the old system he might be intelligent but he could not be informed. If, as is quite possible, such exploring courses should lead a pupil into a general elective which later he might wish to change, he still could do so and not be more retarded in his progress than most pupils

are to-day. Exploration at the age of twelve to fourteen is much more economical than it is two or more years later.¹

Try-out courses are very common in the industrial departments of junior high schools. Usually a pupil is given six or nine weeks in a particular shop before being moved on to the next, and frequently the shop-work is supplemented by a study of vocations and visits to factories. The so-called Ettinger plan ² in New York City, perhaps the most widely known, has this program. In New Britain, Connecticut, the pupils repeat the cycle in the second year, the work being somewhat more advanced than before, and then in the ninth grade enter upon intensive training for some particular trade.

A committee of the National Association of Secondary-School Principals, Paul C. Stetson, chairman, in its preliminary report (1918) strongly advocated that the junior high school be considered "essentially a finding place" for individual pupils. It especially recommends that "whenever possible the rotating scheme of industrial work for the boys and girls of the junior high school age be employed," and suggests the following program:

Grade	Subject	Semester	Hours
7-1	Mechanical drawing	One	100
7-2	Forge	One	100
8-1	Machine	One	100
8-2	Woodworking	One	100
9-1	Printing	One	100
9-2	Electrical	One	100

¹ Briggs: *Proceedings of the Fifty-Second Convocation of the University of the State of New York*, 1916, pp. 97-100. Also in *Education*, vol. 37, pp. 279-89.

² See page 263-64.

It should be noted that a longer period is recommended for the try-out than that used now by most schools using the same general plan.

Such a try-out course may be profitable even to boys who assuredly will not be industrial workers in that it may afford training in the mechanical tasks that most householders are from time to time called on to perform and at the same time an understanding of the work of men following these vocations. Such an understanding of vocations other than one's own is in a way cultural and, moreover, it contributes to the general integration essential in a democracy.

Sentiment is strong for the extension of this plan of "revealing courses" to all departments of the junior high school. To the question, "Do you favor the offering of general courses which, practical in themselves, acquaint the pupils with the possibilities in the general fields of learning and hence make future election more intelligent?" there were 241 replies — 221, or 93.4 per cent, being "Yes," 4 being "To a limited extent," and 12, or less than five per cent, being "No." And an unmistakable tendency toward exploratory work in the several subjects is observed in the schools that have seriously undertaken reorganization of their courses.

The courses of study for all the junior high schools, most of them small, in Vermont have been developed as exploratory. The supervisor of junior high schools writes: ¹

In the small junior high school such as is common in this state, it is a mistake to organize clearly defined, differentiated courses, such as commercial, scientific and college preparatory, and require pupils to select one of them upon entrance. Such an arrangement

¹ Vermont Bulletin 1, 1918, pp. 17, 18.

tends to shunt pupils into certain lines which may be determined by transient interests, and although they may come to realize that they are "misfits" the system makes transfers inconvenient if not impossible.

Furthermore, there is nothing to be gained in confronting pupils at an early age with the problem of deciding just which course they wish to pursue. The evils involved in requiring pupils to make such choices at a later time can be overcome only by having pupils in the junior high school, and particularly in the first two years, become acquainted with a rather broad range of subjects. With the information thus acquired concerning the various subjects and a knowledge of his own interests, aptitudes, and capacities the pupil goes to high school prepared to elect courses because they minister to his felt needs. Two young ladies in a Vermont high school "explored" the commercial course during their sophomore year. They found it to be most unattractive to them and transferred to the general course the next year. When they graduated the past spring they found the doors to college closed to them. They are anxious to enter but feel that they cannot spend an additional year in preparation. Would it not have been much more economical, much less of a tragedy, if they had explored this field during their seventh or eighth year?

There is a general feeling to-day that, in the main, seventh- and eighth-grade pupils will be better equipped for the future for having taken extensive courses touching several fields than for having done intensive, specialized work in a single field. There may be exceptions to this where pupils must prepare in the least possible time for specific work, but as a rule if pupils drop out early they will find an elementary acquaintance with general fields of knowledge most helpful. If they remain in school such an experience gives intelligent direction and point to all their future work.

The Commission on the Reorganization of Secondary Education recommends ¹ that

the pupil ordinarily should be assisted at about twelve or thirteen to begin to make a preliminary survey of the activities of adult life and of his own aptitudes in connection therewith, so that, in part,

¹ United States Bureau of Education Bulletin 35, 1918.

he may choose at least tentatively some field of human endeavor for special consideration. Following the period of preliminary survey and provisional choice, he should have opportunity to acquire a more intimate knowledge of the field chosen, including therewith an appreciation of the social significance of that field, and for those whose schooling ends here some mastery of the technique involved. The field chosen will be for some as sharply defined as a specific trade; for others, it will be but the preliminary choice of a wider domain within which a narrower choice will later be made.

For economical classroom organization Snedden offers¹ an interesting suggestion. He proposes

to divide the studies offered, or even portions of given studies into two distinct groups, with reference to one of which quite exacting standards of scholarship shall be maintained as regards the ability of the pupil to stand tests, to explain, and interpret what he has learned, and to retain it as a permanent possession; and with reference to the second category, that the standards of approach shall be those characteristics of learning primarily for appreciation. This distinction, made between studies on the one hand, or between definite portions of such studies as natural science, social science, practical arts, etc., ought to be of considerable value in reducing the amount of time necessary for the actual teaching required. Personally, I believe that we shall yet work out a very extensive scheme of liberal education, based upon what is here called the standards and methods of appreciation. I believe that by the use of libraries, home reading, and amateur constructive work in the practical arts, we shall be able to achieve valuable ends with a very great reduction of the teaching force now required.

This suggestion has been adopted in the curricula for the junior and senior high schools of New Hampshire.

The fifth, and final, purpose of the junior high school is to start each pupil on the career which, as a result of the exploratory courses, he, his parents, and the school are convinced is most likely to be of profit to him and to the State. Based

¹ *Problems of Secondary Education*, pp. 119, 120.

on courses exploratory of the pupils' interests, aptitudes, and capacities, and for them of possibilities in the major fields of learning, the beginning of differentiation in work should be more in accord with life needs than it can be under the present organization. It is certain, however, that some young people, like some adults, will change their intentions after launching on an elected curriculum. Inasmuch as in the junior high school the differentiation will be gradual, such pupils as wish to change may do so with a minimum of loss; but it is only reasonable to hold that every major change of life purpose must be paid for in time and effort. The Solvay (New York) Junior High School has an adjustment year for those pupils who had started work for which they later proved unsuited, permitting all others to proceed with some saving of time on their elected curricula. Most schools, however, are likely to transfer pupils from one curriculum to another with an actual loss of learning for specific life purposes, but with little or no penalty toward graduation. As a matter of fact "graduation" from the junior high school is likely to receive less and less attention as pupils are sent onward to higher work for which they are fitted.

This purpose, be it noted, is after exploration to *start* pupils on differentiated work: the suggestions are that the differentiation has been rationally determined, that it is gradual, and that it furnishes a transition to the period when each individual assumes the responsibility for his own future. If the work that he has begun proves interesting, suitable to his powers, and promising of sufficient contribution to his vocation, he is likely to find some way of continuing it; otherwise, the chances are strong that as soon as he leaves

the junior high school he will turn to something else, probably discontinuing his formal study altogether. The school, then, assumes the responsibility not only of directing the exploration, but also of helping to so sound a decision and so profitable a beginning of differentiated work that it will be continued in other types of schools as long as it proves profitable.

Extreme differentiation in the junior high school is seldom if ever advocated for normal pupils. The general attitude is well represented by the two following quotations:

Any one who is disposed to divide the course of study of the seventh grade into entirely separate and distinct curricula for different children does violence to the fundamental demands of a democratic organization. On the other hand, any one who would hold the course of study at any point to rigid and narrow lines does violence to the narrow demands which express themselves in the differentiated interests of the pupils.¹

[The] committee feels that extreme differentiation in the matter of curricula is not desirable. We believe it is wrong to allow seventh-grade pupils to elect courses which will definitely determine and limit their future school life. Individual pupils may always be made an exception to the general rule.²

The opposition to fully differentiated curricula during or before the ninth school year is generally waived for one class of pupils — those who more or less retarded are approaching the end of the period of compulsory education with minds fully set on leaving school. For such pupils there is general agreement that highly individualized programs should be prepared. For them the work may be strictly vocational as many hours as need be, the hope being that in their last

¹ Bagley and Judd: *School Review*, vol. 26, p. 321.

² Committee of National Association of High-School Principals, P. C. Stetson, chairman, 1916.

months in school they will acquire also some facts, principles, and ideals which may later contribute toward a more full and rounded life.

Ideally the beginnings of differentiation should be in the junior high school so that pupils may go on gradually to more completely individualized work; but it is obvious that the smaller the school, the less differentiation is possible. In many places, then, it will be wise for the schools to concentrate their efforts toward satisfying the first four purposes discussed, leaving the last one to specialized schools in their own or other localities. When only one curriculum can be offered, it is postulated that it shall be so constructed as to promise the maximum return to the local community and to the majority of pupils in the class. The curricula and courses of study in Vermont junior high schools are more nearly consistent with these principles than any other that have been examined. There the offerings often depart widely from those in a "college preparatory course," not because of any hostility to higher education, but, rather, because of the needs of the majority of pupils in the community. Ordinarily those intending to go to college can satisfy any reasonable requirements before completing the senior high school; but if only the needs of the majority of pupils in the community are supplied by the school, the special needs of the minority must be satisfied privately by individual parents, by larger political units such as the State or Nation, or remain unsupplied.

The foregoing principles are presented as representing the ideals of the junior high school and its tendencies. It will be futile to look anywhere for a perfect exemplification in

practice of these ideals; the movement is too young, the demands of physical reorganization have been too pressing, and the possibilities have often been conceived in too limited a manner. But in many schools there are significant changes in details of this course or the other, as some teacher has had vision, independence, and originality, or as some local demand has been so strong as to secure modifications in subject-matter. And the newer textbooks are spreading to other teachers and other schools outlines of courses that are considerably changed from those now most generally used. There can be little doubt that as the junior-high-school movement spreads the modifications in subject-matter will increase — in fact, its spread and continuance depend very largely on the adaptations of curricula and courses to satisfy social and industrial demands. Some general principles — either those presented in this chapter or substitutions for them — are needed, and the more frankly such principles are considered the greater the probabilities of educational success.

Proposed curricula. One of the most fundamentally sound considerations of the junior-high-school curricula is that of Bonser in "Democratizing Secondary Education by the Six-Three-Three Plan."¹ Using data in the Census Report of 1910, he states that in all fields of vocations but two — public service and professional service, which claim only 5.6 per cent of men and women —

a great majority of workers usually begin, and will continue to begin, wage earning by the age of fourteen, sixteen, or eighteen years. Their preparation for both wage earning and the other

¹ *Educational Administration and Supervision*, vol. 1, pp. 567-76.

activities of citizenship is seldom more than from two to four years beyond the sixth grade, and at best rarely more than six years. The intrinsic nature and the vocational destiny of most of our population therefore call for differentiation in treatment at from two to six years before they leave school for the vocations.

The differentiation needed from both the psychological and social standpoints does not by any means require group isolation. Rather more than half of the interests and the means of appropriate growth are still common to all children in the seventh, eighth, and ninth school years. It is in those subjects and fields only in which marked differences are evident that differentiation is needed. Individual capacities, inclinations, purposes, and considerations of time will usually determine lines of selection. Where doubt exists a conference of parents and teachers will usually help to point the way.

The aptitudes of pupils and the vocational purposes toward which *they incline pupils* will lead to a fairly well-defined division into five groups where large numbers of pupils are considered. These may be called, respectively, the academic, the industrial, the commercial, the agricultural, and the household arts groups. In small schools, one or more of these groups may not be large enough to justify representation by differentiated courses [curricula]. In such cases compromises will not be difficult. . . .

The differentiations will call for elective courses of five general groups somewhat as follows:

Academic — foreign languages, algebra, geometry, technical English.

Industrial — industrial arts, industrial drawing and design, industrial mathematics, industrial science.

Commercial — bookkeeping, accounting, salesmanship, office practice, typewriting, stenography, commercial forms.

Agricultural — elementary agriculture, farm mechanics, farm mathematics and accounts.

Household Arts — textiles and clothing, foods and cookery, interior design and decoration, household management and accounts.

Bonser makes no attempt to distribute the work in any of these fields through the three years.

The purpose [he continues] is to indicate that for each group there is a definite content appealing to the varied interests and capacities of pupils and pointing toward the large fields of vocational differentiation.

By rating each year's work at thirty units, a distribution of eighteen to work in common and twelve in the differentiated field, gives a total of fifty-four in common and thirty-six in the group courses. The fifty-four units covering subject-matter of common value and about equal interest if properly humanized may be distributed as follows:

12 units.....	English
8 units.....	History
8 units.....	Geography
8 units.....	Elementary science
5 units.....	Everyday mathematics and economics
6 units.....	Civics, problems in institutional and vocational life
4 units.....	Physical education
3 units.....	Music

The thirty-six remaining units may be made up by selecting entirely from the offerings in any one of the five groups selected in the foregoing, or by some selection from two or more groups.

The whole problem is not so much one of new courses [curricula], or new administrative machinery, as it is of reorganization and redirection of much of the secondary school work in terms of twentieth-century social needs and values.

After outlining historically the curriculum changes in one high school, Newlon ¹ tells how a satisfactory condition was secured by offering a number of curricula diversified according to the needs of the pupils, in each of which certain groups of subjects were required for the purpose of securing integration, continuity of work, and a desirable mastery in some fields. Newlon continues:

¹ "The Need of a Scientific Curriculum Policy for Junior and Senior High Schools," *Educational Administration and Supervision*, vol. 3, pp. 253-68.

All that I have said concerning the problems of curriculum making in the senior high school will, in my opinion, hold good in the junior high school. The same principles of curriculum differentiation, of constants and of sequence and diversity, will hold in the junior cycle that will hold in the senior cycle of our secondary schools. . . . The growth of the junior-high-school idea means that in this country, students of education and administrators of schools are rapidly accepting the proposition that differentiation of curriculums ought to begin in the seventh year. The differentiation in the junior high school will not be as distinct as, and will not be carried to anything like the extent that it will be carried in the senior high school.

What curriculums will there be in the junior high school? In general, there will be the following: college preparatory, general, commercial, industrial, household arts, a total of five for those students destined to enter the senior high school. In addition, there will be a group of curriculums of a highly specialized trade character for those who will never enter the senior high school, but will at once become wage-earners.

The principles of diversity and sequence, and of constants, applicable to curriculum making in the junior high school will be the same as in the senior high school. If we accept the principles of differentiation in the junior-high-school grades, the problem of constants, or of the common elements as they are called by Professor Bagley, is a matter of supreme importance. For very obvious reasons, more work in more different subjects will be prescribed for all students in the junior high school than in the senior high school. To the prescription of English, social science, science, music, and physical education in the senior high school must be added arithmetic, geography, and probably the manual arts in the junior high school. Some great educational battles will be fought over the amount of time to be given to these constants in the junior high school and to the character of the subject-matter and method in these courses. The disagreement as to the content, organization, method, and length of the general science course is characteristic of the chaotic condition as regards these constants in the junior high school at the present time. The situation as regards general science is simply notorious, but the condition as regards mathematics, the social sciences, and, perhaps, some other subjects, is not less chaotic. Every development in these grades points

clearly, however, to the general adoption of differentiation above the sixth grade. These constants will be permitted, therefore, to take only so much time as will allow opportunity for the working out of such definite curriculums as have been described above.

The very fact that the number of constants will be greater in the junior high school than in the senior high school will make less difficult the problem of sequence and diversity. Once the battle has been fought and the constants agreed upon the matter of sequence and diversity will have been practically settled. There will be a sufficient number of constants running through two or three years of the junior high school to assure both the desired sequence and diversity.

The North Central Association of Colleges and Secondary Schools in 1918 recommended that:

The appropriate subjects for the junior high school may be classified in the following groups:

1. Mathematics; 2. Social Studies; 3. Natural Science; 4. Language; 5. Fine and Practical Arts such as Music, Drawing, Manual Arts, and Commercial Subjects.

The administration of the program of subjects and courses shall be such as to avoid a stereotyped line of work for all junior high-school pupils, but sufficiently restricted as to insure for all pupils a wide distribution in the election of subjects and a continuity of at least two years' work in three different groups of the five junior high-school groups specified. It is further recommended that provision be made for progress of pupils in accelerated, median, and slow groups.

Perhaps the most comprehensive and at the same time definite of the considerations of the junior-high-school curriculum is that by Inglis.¹ Because of its importance it is quoted in full.

Below are outlined two forms of curriculum organization which are suggested as possible schemes for the junior high school—grades seven, eight, and nine. Neither, of course, is to be consid-

¹ *Principles of Secondary Education*, pp. 685-87.

ered as the necessary or even the most desirable form of organization. The sole purpose in presenting the two forms of organization is to illustrate possible ways in which principles previously considered may be applied.

FORM I

Grade 7		Grade 8		Grade 9	
Studies	Periods	Studies	Periods	Studies	Periods
<i>Constants:</i>		<i>Constants:</i>		<i>Constants:</i>	
English.....	5	English.....	5	English.....	5
Geography (3), history (2).....	5	History (U.S.), civics.....	5	Community civics.....	5
Physiology and hygiene.....	3	General science.....	5	General science.....	5
Arithmetic.....	5	Mathematics: (A) combined arithmetic, algebra, geometry; <i>or</i> (B) commercial arithmetic.....	4	Physical education.....	2
Physical education.....	2	Physical education.....	2	Music (appreciation).....	2
Music (appreciation).....	2	Music (appreciation).....	2		
Practical arts: domestic arts (girls); manual arts (boys).....	5				
Total constants.....	27	Total constants.....	23	Total constants.....	19
<i>Variables:</i>		<i>Variables:</i>		<i>Variables:</i>	
English: various branches for those deficient.....	2	English: various branches for those deficient.....	2	Foreign languages.....	5
Arithmetic: for those deficient.....	2	Foreign languages.....	5	Mathematics.....	5
Foreign languages.....	5	Fine arts.....	3	History.....	4
Fine arts.....	3	Music (technical).....	3	Fine arts.....	5
Music (technical).....	3	Commercial studies.....	5-10	Music (technical).....	3
Commercial studies.....	5	Clerical studies.....	5-10	Commercial studies.....	5-15
Clerical studies.....	5	Industrial studies.....	5-10	Industrial studies.....	5-15
Industrial studies.....	5	Domestic studies.....	5-10	Domestic studies.....	5-15
Domestic studies.....	5	Agricultural studies.....	5-10	Agricultural studies.....	5-15
Agricultural studies.....	5				
Total variables.....	4-8	Total variables.....	8-12	Total variables.....	12-15

NOTES: 1. The numbers of periods set are merely approximations and intended to be suggestive rather than fixed.
 2. The practical arts constant in the seventh grade may be made diagnostic "short-unit" courses if desired.
 3. It is not expected that all schools, perhaps not any school, will provide all the studies listed under variables. The extended list is presented for selection according to the needs and resources of any given school.
 4. It is expected that the more able pupils may pass directly from the eighth grade into the senior high school.
 5. Definitely separated curriculums may be organized for special groups of pupils who will leave school at the close of the ninth grade, if that course appears justified.

Form I illustrates a possible curriculum organization for a junior high school where no provision is made for supervised study or combined recitation-study periods. The number of class meetings is assumed to correspond to present practice in the seventh and eighth grades, that is, about thirty to thirty-five class meetings per week, the length of each period being approximately thirty minutes.

FORM II

Grade 7		Grade 8		Grade 9	
Studies	Periods	Studies	Periods	Studies	Periods
<i>Constants:</i>		<i>Constants:</i>		<i>Constants:</i>	
English.....	5	English.....	5	English.....	5
Geography and history	5	History and civics.....	5	Community civics...	4
Arithmetic.....	5	General science.....	4	General science...	4
Physiology and hygiene	3	Mathematics.....	4	Physical education...	2
Physical education....	2	Physical education.....	2		
Practical arts.....	5				
Total constants.....	25	Total constants.....	20	Total constants...	15
<i>Variables</i>	5	<i>Variables</i>	10	<i>Variables</i>	15

NOTES: The notes appended to Form I apply here. The same studies as those in Form I are meant here. The variables are the same here as for Form I.

Form II illustrates a possible curriculum organization where provision is made for combined recitation-study periods. The entire school day is assumed to be seven hours in length — one half-hour each day for assembly, opening exercises, music, and auditorium work, one half-hour each day for lunch, and six hours net (including time for changing classes) for class meetings, each period being one hour in length (inclusive of time for change of classes). The same program may be encompassed in a six-hour day where each period is made fifty minutes in length.

Curricula offered. From a study of the curricula in 75 junior high schools (only 31 having a ninth grade) Douglass¹ found that optional work was offered by 55 per cent of the schools in the seventh grade, by 67 per cent in the eighth, and by 97 per cent in the ninth. The details concerning the several subjects are displayed in Table XXIII as A; the details opposite B are from 18 cities which have junior high schools conforming to a definition that requires: (1) separate organization; (2) differentiated curricula; and (3) promotion by subject. The curricula of only six of these cities were considered by Douglass. The differences between the two groups of curricula are chiefly that the group of cities

¹ Douglass: *The Junior High School*, pp. 78-87.

TABLE XXIII

SHOWING BY PERCENTAGES THE OFFERINGS IN REPRESENTATIVE-
JUNIOR HIGH SCHOOLS

A, from Douglass data; B, from original data

		Seventh Grade			Eighth Grade			Ninth Grade		
		Required	Elective	Not offered	Required	Elective	Not offered	Required	Elective	Not offered
English	A	100	..	..	100	..	..	100	..	..
	B	100	..	..	94	6	..	100	..	..
Social Sciences	A	100	..	..	95	4	1	29	61	10
	B	62	12	26	83	6	11	20	47	33
Mathematics	A	100	..	..	92	8	..	45	55	..
	B	100	..	..	83	11	6	67	26	7
Science	A	19	8	73	24	20	56	23	74	3
	B	12	19	69	17	17	66	40	33	27
Geography	B	63	13	24	33	..	67	..	40	60
	A	56	8	36	56	5	39	23	35	42
Hygiene	B	31	..	69	55	22	23	13	13	74
	A	7	40	53	7	57	36	..	100	..
Foreign Languages	B	6	75	19	6	88	6	..	80	20
	A	64	16	20	52	23	25	26	48	26
Art	B	69	19	12	33	33	33	7	67	36
	A	63	13	24	61	22	17	40	40	20
Music	B	63	13	24	37	49	14	13	74	13
	A	45	32	23	56	33	11	13	80	7
Industrial Arts	B	75	25	..	..	..	..	..	..	..
	A	1	17	82	1	32	67	..	55	45
Commerce	B	..	37	63	28	11	61	..	73	27

with junior high schools tested by the definition offer a more generous program of studies and a larger number of options.

In so far as the curricula from which the table is compiled are representative, Douglass found that

the average curriculum for the first year of the junior high school is: English (6 periods per week), with reading, writing, grammar, spelling and penmanship taught separately or in rather poor co-ordination under the general heading; social science (5), presented

as history and geography; mathematics (5), meaning arithmetic; physiology and hygiene (3) or physical training (2); drawing (2) and perhaps music (2); manual training (2) or domestic science (2). For the second junior-high-school year the average curriculum is: English (5) — much the same as that in the first year; history (5) or civics (5); arithmetic (5); physiology and hygiene (3) or physical training (2); music (2) or drawing (2); and an option between Latin or German (5) and manual or domestic science (2).

Real differentiation is under way in the ninth grade. Here the only required subject is English, and options are allowed — under supervision — to the extent that the pupil practically selects his own work. He may choose among Latin and German, history, algebra, general science, music and drawing, manual or industrial arts and domestic science, and certain commercial subjects.

As a result of studying the programs of seventy-five schools, Douglass attempted the difficult task of classification. The results, which he declares to be "unsatisfactory on account of overlapping," are quoted:

1. One type is made up of the common branches with no elections until the ninth year, when a choice may be made among languages, industrial arts, and perhaps science. This type often contains no manual- or domestic-arts courses.

2. A second curriculum is essentially the same as the first, save that manual training and domestic science are found throughout. Language may usually be begun in the eighth grade. Here also are feeble beginnings at a systematization of subject-matter.

3. A third type consists mainly of the common branches, with languages, manual training or industrial arts and domestic arts, science, and commerce, but the subject-matter is being subjected to an overhauling, condensation and elimination of non-essentials, and is being correlated with the elementary school from below and with the senior high school from above. In varying degrees, also, subject-matter is being given its social and economic setting. A few elections are given the first year; more opportunity for choice is given the second, while in the third year English is about the only required subject. Under the general heading several sub-types are found:

(a) A general curriculum, in which the pupil elects such subjects as are not required of all. Sometimes statements are made to the effect that the pupil, the pupil's parents, and the principal or teachers coöperate in determining elections; frequently no such statement is made. Here elections seem to carry no further than the semester or year. This is a very common type.

It would seem that this plan offers a wide range for individual development through its adaptability to individual differences, and certainly an ample chance for adjustment in case of a wrong choice. On the other hand, it might be objected that it does not make adequate provision for continuity of effort.

(b) Another type combines the general-curriculum with the separate-curriculum plan. Except for more or less elective privileges in the seventh and eighth grades, work is the same for all; with the ninth grade, distinct curricula are provided, and these are carried into the senior high school. This seems to be a rudiment of the eight-four plan where differentiated work was provided beginning with the high school. It assumes that the ninth-grader has reached a place where he can choose more specialized work, and it aids him in his decision through elections during the two preceding years.

(c) A common type is divided into two or more curricula, such as the "regular academic," the "industrial," and the "commercial." Here subjects like English, arithmetic and history, are the same for all pupils, and the curriculum is often named from one or two subjects that differ from the common stock. The main difference between this and Type (a) seems to be that the pupil decides at the beginning what work he is to pursue for three years.

Without doubt this plan tends to reduce to a minimum the disadvantages of the elective system. It must assume, however, that no mistake has been made in selecting the courses to form a definite curriculum and that the pupil has chosen correctly. Sometimes provision is made for transfer, if it is shown that the pupil is clearly unfitted for the work he has chosen, but more often the pupil is given to understand that after the first year it will be difficult for him to change. Rarely are electives provided within the curriculum. Lack of flexibility at the time when ability should be tested in a number of fields seems to be the greatest fault of this type.

(d) Another type is divided into two-year "cycles." To some extent options are given at the beginning of the seventh year, but

the selection at this stage carries with it certain subjects or courses and perhaps another cycle as well. At the beginning of the ninth grade a second and even more important selection is demanded.

This method aims at giving the benefit of the elective system and at the same time to insure that continuity of effort which may be lacking in a curriculum consisting largely of free electives. Since a cycle contains a group of subjects, there should also be a closer coördination of work. The work is, however, relatively unchangeable for two years.

4. Another type provides several different curricula, in which subjects and courses are widely differentiated. Thus, English or arithmetic, varying but little from the traditional course, is provided for pupils who expect to complete the high school and to enter college; commercial or industrial English or arithmetic for pupils whose aptitudes seem to be for this kind of work or whose vocational destinations will probably be the commercial or industrial world. This scheme involves also segregation as to sex. The sexes may be handled together in certain "cultural" subjects, while in the industrial subjects they receive separate instruction. In accordance with this view, there is no call for segregation in the "academic" curriculum and but little reason for segregation in the "commercial" curriculum, excepting when these pupils take manual training, domestic science, physiology and physical training. However, the sexes are kept separate to the degree that science, history, mathematics and the like will differ when founded upon home-making on the one hand and upon industrial arts on the other. Others believe that segregation possesses value in itself.

This plan has been objected to on the ground that it provides a narrow training. A curriculum based entirely upon commercial or industrial branches, it is said, can hardly have the breadth of one including these subjects as electives. Moreover, pupils in these different lines of work are liable not to acquire a sufficient amount of the knowledge that ought to be common to all. The plan is defended on the ground that it provides the best possible means for individual differences and that knowledge really essential may be presented just as easily in a commercial or industrial setting.

5. Whatever may be the general plan adopted, a number of superintendents are providing two- or three-year curricula for pupils who expect to leave school at the end of the eighth or ninth

school-year, and who, as a consequence, desire training productive of immediate financial returns. This training is for the most part along commercial, industrial and home-making lines, and these lines are closely articulated with commerce, the industries and the home. It is realized that difficulty will arise in the planning of other work should a pupil desire to remain in school at the end of this time, and some are taking steps to remedy this trouble.

6. Gary has often been said to possess a junior high school, not because of outward features of organization, but because of the educational principles upon which the system is founded. . . .

7. In the course of the junior-high-school reorganization into prevocational departments, fragments have split off — the industrial arts department withdrawing to form a separate elementary industrial or prevocational school. But, though narrowed to the industries, these schools still possess striking vocational guidance functions. In some localities schools are provided for "motor-minded" students; in others, all students are given this work.

In the North Central Territory Davis¹ found that 52.2 per cent of the junior high schools give the pupils a choice

TABLE XXIV

PER CENT OF JUNIOR HIGH SCHOOLS IN THE NORTH CENTRAL TERRITORY OFFERING SEVERAL SUBJECTS AS ELECTIVES

Latin	27.6
Modern foreign language.....	27.3
Algebra	24.2
General science.....	30.4
Manual training.....	88.7
Domestic science and arts	88.4
Drawing.....	75.4
Music.....	71.7
Agriculture.....	25.9
Ancient history	3.8
General history of modern Europe.....	6.5
Commercial work.....	16.7
Distinctive vocational work.....	5.1
Printing.....	8.2

¹ *School Review*, vol. 26, pp. 326-28.

of curricula or subjects. The percentage offering each of several elective subjects is shown in Table XXIV.

Davis reports also that of the 293 junior high schools of the North Central Territory 34.8 per cent have definitely outlined curricula, 25.3 per cent allow election by curricula,

TABLE XXV

SHOWING THE KINDS OF INDUSTRIAL WORK OFFERED FOR BOYS BY
173 JUNIOR HIGH SCHOOLS AND THE NUMBER OF SCHOOLS
OFFERING EACH KIND

None..... 20

<i>Agricultural:</i>		<i>Industrial:</i>	
Agriculture.....	19	Forging.....	5
Gardening.....	7	Blacksmithing.....	2
Pomology.....	1	Machine shop.....	15
Dairying.....	1	Metal work.....	26
Drainage.....	1	Tinning.....	1
Farm shop-work.....	2	Foundry.....	1
Hot-bed construction,.....	1	Molding.....	1
Buying, selling, and marketing.....	1	Automobile repair...	4
<i>Industrial:</i>		Gas engine.....	1
Woodwork.....	77	Electrical work.....	15
Carpentry.....	48	Plumbing.....	3
Manual training.....	23	Engineering.....	1
Pattern-making.....	11	Applied mathematics	1
Repair work.....	5	Tailoring.....	1
Turning.....	2	Rug-making.....	1
Millwork.....	2	Basketry.....	1
Furniture.....	1	Reedwork.....	1
Boat-building.....	1	Bookbinding.....	3
Building trades.....	1	Shoe repairing.....	2
Painting.....	13	Barbering.....	1
Cement work.....	11	Butchering.....	1
Applied drawing.....	33	Cooking.....	11
Drafting.....	1	Printing.....	37
Sketching.....	1	Bill-posting.....	1
Bricklaying.....	11		

and 48.5 per cent allow election of subjects. These latter proportions, it will be noted, are somewhat smaller than for the schools Douglass used as representative.

Of the 182 junior high schools answering the question for this study 67, or 37 per cent, report that they have fully differentiated curricula, though the term is not defined; and 14, or an additional 7.5 per cent, report that they have partly differentiated curricula. Of the 182 schools, 116, or 63.7 per cent, offer an academic curriculum; 94, or 51.6 per cent, a commercial; 94, or 51.6 per cent, a practical arts; and 23, or 12.6 per cent, a special trade.

The kinds of industrial work offered for boys and the number of schools, of 173 reporting, that offer each kind, are shown in Table XXV. The variety, which is astounding, shows either a vagueness as to educational values or else a serious attempt to meet local needs, — probably both.

Of 198 schools reporting on this topic, 134, or 67.7 per cent, say that they have modified none of their subjects in content, method of treatment, and difficulty of mastery with reference to the "curriculum setting" in which they appear. This is a disappointing report, unless, as is entirely possible, the question was because of its terminology not understood. Of the remaining 64 schools 13 answer merely "Yes." The 53 that answered the question as stated report that they have modified the subjects as following with regard to their curriculum setting:

	No.	Per cent
English.....	27	50.9
Spelling.....	1	1.9
Penmanship.....	1	1.9
Typing.....	1	1.9

	No.	Per cent
Foreign languages.....	2	3.8
History.....	16	30.2
Geography.....	6	11.3
Drawing.....	4	7.6
Mathematics.....	45	84.9
General science.....	5	9.4
Shop-work.....	1	1.9
Practical arts.....	2	3.8

An effort was made to ascertain the school subjects in which the course of study has been materially changed from that used in the grammar grades or in the first year of the high school. Of 191 schools answering, 27, or 14.1 per cent, admit that they have made no changes whatever. Judged by the interviews with a few of the principals who have made no changes in the courses of study, it is safe to say that almost without exception they are in varying degrees dissatisfied with some of the work now offered but that they lack vision, a definiteness of purpose, and the energy to initiate changes. The usual excuse is that "we have n't got around to that yet." Inasmuch as the courses of study for so large a proportion of our conventional schools are determined by textbooks, it is probably useless to expect material changes in any considerable number of intermediate schools until textbooks and syllabi indicate in detail what may and should be done.

The extent to which the 191 schools reporting profess to have made material changes in their courses of study may be seen in Table XXVI. Mathematics of several kinds is said to be materially changed in 51.8 per cent of these schools; the several sciences, in 47.1 per cent; English, in

45.5 per cent; some one of the foreign languages, in 41.9 per cent; and history and civics, in 36.1 per cent.

TABLE XXVI

SHOWING THE NUMBER OF 191 JUNIOR HIGH SCHOOLS PROFESSING TO HAVE MADE MATERIAL CHANGES IN THE COURSES OF STUDY FOR THE SEVERAL SUBJECTS

Subject	Number of schools	Per cent
English.....	87	47.1
Spelling.....	6	3.1
Penmanship.....	3	.2
Commercial subjects.....	10	5.2
Languages.....	21	11.0
Latin.....	25	13.1
French.....	11	5.7
German.....	18	9.4
Spanish.....	5	2.9
History.....	51	26.2
Civics.....	18	9.4
Music.....	8	4.2
Fine arts.....	8	4.2
Applied art.....	5	2.9
Mathematics.....	31	16.2
Arithmetic.....	56	29.3
Algebra.....	12	6.3
“Science”.....	43	22.5
Agriculture.....	6	3.1
Civic biology.....	1	.5
Geography.....	31	16.2
Hygiene.....	7	3.6
Physiology.....	2	1.0
Industrial subjects.....	9	4.7
Manual training.....	19	9.9
Home economics.....	14	7.3
Physical training.....	4	2.1
All subjects.....	3	1.5
Many subjects.....	1	.5
None.....	27	14.1

It should be noted that we are *not* warranted in concluding that 166 (191-25) schools have made no change in the Latin work, that 186 have made no change in the Spanish, etc., for certainly all of the 191 schools reporting did not offer Latin, Spanish, or most of the other subjects that are commonly taught only in the high schools. Of the schools reporting, 86 per cent had already by 1917 made what they consider material change in some phase or phases of their work. This argues well for the future.

It has already been stated (page 172) that fewer than five per cent of 241 principals responding oppose the exploration of pupils' interests, aptitudes, and abilities by means of general courses. The extent to which such courses were in 1917 offered in the several years of junior high schools may be seen in Table XXVII.

TABLE XXVII
SHOWING THE NUMBERS OF JUNIOR HIGH SCHOOLS OFFERING
GENERAL EXPLORATORY COURSES IN SEVERAL SUBJECTS

Year	General science	Composite mathematics	General history	General social science	Reading and literature
None	11	28	27	31	12
VII	36	29	29	9	58
VIII	101	101	28	27	89
IX	111	78	56	21	90
Totals Reporting	259	236	140	88	249

Two hundred and fifty-nine schools report on the general introductory science; the fact that the number reporting on the other subjects falls as low as 88 may be interpreted as indicating that for the most part the schools not offering such subjects do not trouble to fill in answers. Assuming that this is true, we should find that of 259 junior high schools the percentages offering general science is 95.4; general mathematics, combining arithmetic, algebra, and the simple elements of geometry or trigonometry, or both, 80.0; general history, 43.5; general social science, 21.9; a course of extensive reading and study of literature, 91.2. The actual numbers of schools and the percentages on the basis of all reporting on any of these subjects are highly gratifying to those who believe that progress for the intermediate school should be in this direction.

After studying the data given in this report and those by Douglass and Davis, one cannot but be convinced of a general and widespread dissatisfaction with curricula and courses of study for the intermediate grades; of a lack of definiteness in programs for reform; of approval by the country at large of earlier differentiation after exploratory courses; and of an astounding amount of variation in practice. This "groping, testing, passing on" is probably necessary for progress. In the meantime we may be very sure that many schools will profess to have reorganized when they have made only "paper changes" in both organization and courses. We shall profit most by considering the real changes that have been made and their results.

The extent to which curricula and courses are elected. The extent to which the several curricula and courses are

elected in representative schools will now be shown. In Rochester the three curricula were in 1916 elected by the following percentages of the junior and senior high school pupils.

TABLE XXVIII

SHOWING CURRICULUM ELECTIONS IN ROCHESTER, NEW YORK, 1916

<i>Junior High School</i>	<i>Curriculum</i>	<i>Senior High School</i>
33.....	General or college preparatory.....	66
33.....	Commercial.....	27
34.....	Trade.....	7

In Los Angeles there was in 1916 a wide divergence in the different schools in the percentages of pupils electing the different courses. This, of course, is as it should be, for the schools draw from very different types of homes; Berendo, for instance, is a suburban school drawing from well-to-do

TABLE XXIX

SHOWING THE PERCENTAGES OF 6311 PUPILS ELECTING VARIOUS CURRICULA IN THE JUNIOR HIGH SCHOOLS OF LOS ANGELES, 1916

<i>School</i>	<i>Literary- scientific</i>	<i>General elective</i>	<i>Com- mercial</i>	<i>Mechan- ic arts</i>	<i>Home economics</i>	<i>English prepara- tory</i>
Berendo	61	19	12	2	2	3
Boyle Heights....	40	21	17	2	12	5
Custer Avenue....	48	14	31	.1	.1	4
Fourteenth Street .	39	12	11	8	20	10
McKinley Avenue.	48	2	23	7	14	7
Sentous.....	59	10	16	3	7	3
Virgil.....	82	3	5	1	1	4
Thirtieth Street...	55	12	14	2	8	8
Total.....	51	12	16	7	9	6

and educated families, while 14th Street enrolls almost entirely the children of the lowly. The six curricula were elected in eight intermediate schools by the percentages of 6311 pupils indicated in Table XXIX.

In Oakland, California, the same optional subjects are not offered in all the schools. Where offered the subjects were elected in 1917 by the percentages of pupils indicated in Table XXX.

TABLE XXX

SHOWING THE PERCENTAGES OF JUNIOR-HIGH-SCHOOL PUPILS ELECTING VARIOUS SUBJECTS IN OAKLAND, 1917

<i>Subjects</i>	<i>Percentages</i>	<i>Subjects</i>	<i>Percentages</i>
Latin.....	21	Extra freehand drawing.....	13
German.....	23	Mechanical drawing.....	3
French.....	32	Extra manual training.....	18
Spanish.....	28	Extra sewing.....	9
Science.....	75	Extra cooking.....	18
Instrumental music.	16	Vocational work (vocational school).	52
Extra vocal music..	32	Typewriting.....	22

In two Minneapolis junior high schools the elective subjects were chosen by the approximate percentages of 816

TABLE XXXI

SHOWING THE PERCENTAGES OF 816 PUPILS ELECTING VARIOUS SUBJECTS IN THE JUNIOR HIGH SCHOOLS OF MINNEAPOLIS

<i>Subjects</i>	<i>Percentages</i>
Extra English.....	4
A modern foreign language.....	20
Shop-work.....	57
Agriculture.....	17
Home economics.....	43
Commercial subjects.....	19
Printing.....	6

pupils indicated in Table XXXI, allowance being made for enrollment by sex.

In three Richmond, Virginia, junior high schools subjects were chosen by the percentages of 1732 pupils indicated in Table XXXII.

TABLE XXXII

SHOWING THE PERCENTAGES OF 1732 PUPILS CHOOSING VARIOUS SUBJECTS IN THE JUNIOR HIGH SCHOOLS OF RICHMOND, VIRGINIA

<i>Subjects</i>	<i>Percentages</i>	<i>Subjects</i>	<i>Percentages</i>
Business English.....	27	Algebra.....	5
Latin.....	18	Elementary science.....	6
French.....	7	Typewriting.....	16
German.....	7	Bookkeeping.....	9
Spanish.....	4		

To what extent pressure is exerted on pupils to elect certain curricula it is, of course, impossible to ascertain with any degree of accuracy; but it must be considerable. In some schools only the more able pupils are permitted to elect a foreign language, and observation leads to the conclusion that the general attitude of the principal or superintendent is very potent, even where teacher advisers are at work, to determine a pupil's curriculum. An attitude changed by experience is revealed in two reports from Butte, Montana. In 1914 the principal of the junior high school wrote:

If there is the slightest doubt in the pupil's mind regarding the possibility of his finishing high school, he should elect the vocational course.

Two years later the same principal reported:

Experience with this double course revealed to us that a large number of pupils who intended to go on to higher institutions chose the vocational course, thereby breaking down the real function of this dual differentiation. We furthermore observed that many students whom we were assured would not go on to high school chose the general course because, as we believed, they felt a social stigma attached to the vocational course. With the present (single) course this differentiation has disappeared and all students mingle upon a similar educational basis.

But with the single course this school offered a number of electives, thus providing for differentiation.

CHAPTER VII

METHODS OF TEACHING

ONE purpose in the establishment of junior high schools has been the improvement of instruction for pupils of early adolescence. While it is recognized that methods in the lower elementary grades are probably more sound than anywhere else in the public-school system and that there has also been a betterment of teaching in the high school as well, most schoolmen agree that there is need for a peculiar adaptation to pupils of the intermediate period. In the grammar grades methods that have proved effective with younger pupils are at present too long continued, and in the ninth grade are frequently assigned the younger and less experienced teachers who have neither intimate knowledge of boys and girls nor skill in instruction.

It is of vital importance [says the report of the High-School Masters' Club of Massachusetts¹] that the methods of the high school shall not be thrust upon the junior high school. It is equally important that the methods of the lower grades shall not be continued. A wise compromise between the two methods of teaching must be sought. The developing individuality and mental traits of the pupil in early adolescence must be recognized by methods of presenting the subjects of study, and more may safely be left to the initiative of the pupil than in the lower grades; but at the same time the beginner in the junior high school must not be abruptly thrown on his own responsibility as he generally has been in the past on entrance to the high school.

Superintendent H. B. Wilson states that "the teaching methods should approximate those by good high-school teachers who remember that they are teaching children rather than subjects." Of 61 selected judges 72.1 per cent consider ¹ essential for the junior high school methods between those of the elementary and of the high schools, and 85.3 per cent consider such methods desirable; 90.1 per cent consider it desirable that the junior high school use methods that encourage initiation on the part of pupils.

Snedden advocates ² a change from the traditional methods of drill and memory and formal analysis, by which external bits of memory are acquired, to natural methods based on the nature of the learning process. He would have methods grow out of educational experimentation in all the varied school activities. He advocates that methods be in keeping with the new and variable types of subject-matter to be introduced into the junior high school, methods capable of adaptation to individual differences, methods that shall reveal to the pupil his capacities and develop power in expression, departmental teaching or the Gary plan of allied groups, short unit courses in the practical arts with the project method. He states that the work of these years has too much of repetition and memory drills and that it lacks vitality.³

Davis makes much of the necessity of adapting methods to the early adolescent. He says: ⁴

At this period self-consciousness is born. The interests that formerly held dominant sway are cast aside. New motives stir, new aspirations fire, new goals beckon. Conscious logical reason begins to proclaim itself. The mind is no longer satisfied with mere empirical facts, but it demands that the facts be presented in their essential relations. . . . To employ with him the methods

¹ Briggs: *Educational Administration and Supervision*, vol. 5, p. 283.

² *Problems of Educational Readjustment*.

³ Quoted from Childs: *Reorganization Movement in the Grammar Grades of Indiana Schools*, p. 51.

⁴ Johnston: *High-School Education*, pp. 69-70.

of instruction and training of the elementary schools is to provoke him to truancy, encourage him to evade school work, and impel him to forsake school duties altogether.

The foregoing quotations illustrate the general sentiment that there is need for the adaptation of teaching to the peculiar characteristics of pupils of twelve to fifteen years of age. But it would be futile to hope or expect any mere administrative reorganization to effect a radical change in methods of instruction. Observation of the teaching itself in many classes leaves a sense of disappointment. Although one may safely state that by and large it is better than the pupils would ordinarily have received, the impression is deep that reorganization offers an opportunity rather than assures an ideal. Results are conditioned by the clearness of ideal, on the part of both administrators and teachers; the source, training, previous experience, and supervision of the teachers; the grouping of the pupils; the adoption and administration of supervised study, the project method, and the socialized recitation; the content of the courses of study and the textbooks used. The fact that the junior high school has no traditions and few restrictions from above makes the introduction of reforms comparatively easy; consequently it is in this field of secondary education that progress may most easily be made.

It will be shown that junior-high-school teachers are drawn from a variety of sources, but that there is a distinct tendency to promote for the new work those experienced in the grammar grades, providing they possess or acquire the needed subject-matter. Although teachers are likely to continue much of the method that they have previ-

ously used, they also are strongly influenced by the pupils in a class and to considerable extent by other pupils under their instruction at other times of the day. This is an argument, therefore, for the homogeneous grouping of pupils and for their segregation in an organization separate from that for those considerably younger or older. In no place is supervision of instruction so likely to make quick and profitable returns as in a newly organized junior high school, where the teachers are seeking guidance as to their objectives and methods.

Of 254 junior high schools answering on this topic, 107, or 42.1 per cent, say that their methods of teaching have been influenced most by those used in the elementary school; 118, or 46.5 per cent, say by those used in the high school; 26, or 10.2 per cent, say "by both"; and 3, or 1.2 per cent, say "by neither."

Two hundred and eight junior high schools reply to the question, "Have you really succeeded in combining the best features of both the elementary and the high-school methods?" Of these 172, or 82.7 per cent, say that they have; 30, or 14.4 per cent, say that they have not; and the remaining 6 "don't know." Most of those who admit that they have not so far succeeded in this, volunteer that it is their aim and that they will attain it in time. Forty-two schools say that there has been little change in methods, and 35 assert that there has been much.

A. SUPERVISED STUDY

The adoption of supervised study, the project method, or the socialized recitation inevitably results in some modifica-

tion of teaching methods, the amount of change depending chiefly on the preparation made and the supervision afforded. Supervised study, or directed learning, attractive in its program and generally approved in theory, has by common testimony disappointed those who expected it to bring great improvement in results, primarily because it involves the most fundamental principles of education. The lengthened and divided period automatically improves conditions in that it insures for all pupils a place and a time for study and in that it affords to the teacher an opportunity to see that his assignment is understood and is of reasonable length; but beyond these details lie the real value and the real difficulty of the plan. To administer it successfully teachers must know what study is, and they must be skilled in the technique of learning.¹ Such knowledge and skill are neither easily acquired nor easily transmitted to pupils. Again painstaking supervision is necessary if the maximum of good is to be secured.

Supervised study is very generally approved for the junior high school. The Commission of the North Central Association of Colleges and Secondary Schools recommended in 1918

that a junior high school shall at least make coördinate its emphasis upon the direction of study and the traditional activity of reciting. It recognizes that different subjects in the junior-high-school curriculum may require different distributions of time between recitation and study. It recommends further that every junior high school provide definite and suitable places for study under expert supervision.

¹ See Dewey's *How We Think*, and *Interest and Effort in Education*; Colvin's *The Learning Process* and *An Introduction to High School Teaching*; and Whipple's *How to Study Effectively*.

On the basis of his study of the causes of failure of high-school pupils Bowden concludes ¹ that supervised study is of especial importance at the beginning of the junior-high-school period.

The plans for directing study vary somewhat, but chiefly they provide that the period be divided, one half for study and one half for recitation. At the Ben Blewett Junior High School study occupies from one third to two thirds of the period. "Actual supervised study for an individual consists in helping him to read with a purpose, to get the content of the written page, and to make use of data selected for a definite end."² Several schools report that some teachers so inadequately understood the plan of supervised study or had so failed to master old habits that the principal had to revoke the privilege of permitting them to use any desired part of the period for "teaching"; in three schools pupils actually petitioned that a bell be rung at the half-period to compel the teachers to stop talking so that study might begin. At the Washington Junior High School of Rochester the periods are eighty minutes in length, and "to the individual teachers are left the details of management within the general provision of three branches — review, assignment, and silent study."³ At Vallejo, California, every deficient pupil must go to his teacher at a designated period, and once in two weeks each class is given at the beginning of the school day a period in which the teacher instructs the pupils how to study for the next two weeks.

Of 267 junior high schools reporting on this topic, 51, or

¹ *School and Society*, vol. 6, p. 448.

² *School Review*, vol. 28, p. 106.

³ *Ibid.*, p. 197.

19.1 per cent, say that they do not have a part of each period set aside for supervised study; 175, or 65.5 per cent, say that they have; and the remaining 41, or 15.4 per cent, have supervised study in some subjects, with some teachers, in stated years, or irregularly. These returns correspond closely with the 59.04 per cent of the junior high schools of the North Central territory that Davis reports as having supervised study.

Two hundred and four schools reported as to the results: 68, or one third, say that they are excellent; 109, or 53.4 per cent, that they are good; 26, or 12.8 per cent, that they are fair; and one that "we have not used it long enough to tell."

B. HOME STUDY

Methods of teaching are influenced to some extent by the amount of home study required. Two hundred and sixty-one schools gave data concerning the amount normally expected, but 56 returned answers that were indefinite or qualified, as may be seen in Table XXXIII. The median amount of home study normally expected by the 205 schools replying definitely is 60 minutes. Of the schools reporting, 70.2 per cent expect from 40 to 90 minutes. The modes, it will be noticed, are 0, 45, 60, 90, and 120 minutes.

Davis¹ found in the North Central territory that of 277 schools reporting on the item, 37, or 13.3 per cent, had periods of 30 minutes; 166, or 59.9 per cent, had periods of 31-45 minutes; 58, or 20.9 per cent, had periods of 46-60 minutes; and 16, or 5.8 per cent, had periods of over 60 minutes.

¹ *School Review*, vol. 26, p. 827. (Percentages corrected.)

TABLE XXXIII

SHOWING THE AMOUNT OF HOME STUDY IN MINUTES NORMALLY EXPECTED EACH SCHOOL DAY OF PUPILS IN 265 JUNIOR HIGH SCHOOLS

Minutes per day	No. of schools	Minutes per day	No. of schools
0	20	70	10
15	2	80	2
20	1	90	30
30	7	100	3
35	2	110	3
40	4	120	24
45	11	130	1
50	1	150	1
60	86	240	1
None in seventh grade..... 4 schools			
None in seventh and eighth grades..... 4 schools			
"Very little"..... 38 schools			
"Varies"..... 2 schools			
"Some in ninth grade"..... 3 schools			
"Only in languages"..... 1 school			
Law prohibits home study for pupils under 15 years of age (California)..... 4 schools			

C. PROJECT TEACHING AND THE SOCIALIZED RECITATION

Project teaching¹ and the socialized recitation,² closely associated in both theory and practice, are also widely approved for junior high schools. Fifty-nine per cent of Briggs's selected judges consider³ it essential, and 90.1 per

¹ See the bibliography published by the United States Bureau of Education: Library Leaflet No. 9, November, 1919, and the annotated bibliography in *Teachers College Record*, vol. 21, pp. 150-74. See especially Kilpatrick: *Teachers College Record*, vol. 29, pp. 319-35; Snedden: *School and Society*, vol. 4, pp. 419-23; and Ruch: *School and Society*, vol. 11, pp. 386-87.

² See Hunter: *Educational Administration and Supervision*, vol. 3, pp. 387-406; Gaston: *English Journal*, vol. 8, pp. 1-7; and Burns: *Education*, vol. 39, pp. 176-81.

³ *Educational Administration and Supervision*, vol. 5, p. 283.

cent consider it desirable that the junior high schools use many projects. Like supervised study they are difficult of successful administration because of their demands on information, attitude, ingenuity, and industry.

In the schools visited there was relatively a considerable amount of project teaching, most in industrial work for boys and domestic science for girls, and less in general science, geography, civics, English composition, and the use of the library.

One hundred and fifty-eight schools replied to the question, "Do you believe in the regular employment of the project method?" Nine frankly stated that they were not sufficiently informed as to the method to express an opinion — a position probably shared by many who did not reply. Of the remaining schools, 118, or 79.2 per cent, said that they believe in the employment of the project method regularly; 18, or 12.1 per cent, that they believe in it "to a certain extent"; and 13, or 9 per cent, that they do not.

The socialized recitation was seen less frequently than project teaching. It was best exemplified at Lincoln, Nebraska, where careful preparation and supervision has made it common and effective in both the elementary and the junior high schools. Combined with the project, it was being admirably used in combined civics and composition.

D. TEXTBOOKS

It is generally recognized that in most schools textbooks determine the methods of teaching probably more than any other factor. In the beginning, junior high schools were forced to use texts prepared for elementary schools or in the

new subjects those for pupils usually one to four years older. There soon followed a series of books "adapted" for the junior high school, the adaptation being more apparent on the cover and title-page than in the body of the text.

As the number of junior high schools increased and as their purposes became clearer, publishers began to issue especially prepared textbooks, notably in mathematics and general science. At the present time, influenced largely by the several special subject reports of the Commission on the Reorganization of Secondary Education, they are spreading to other fields, so that it will not be long before there are in all subjects textbooks quite as adequate for the junior high school as other books are now for the elementary or senior high schools.

It may safely be asserted that by and large the new texts are considerably more in harmony with advanced educational theory than those which are being replaced. In so far as they are sound, their success or failure will be determined largely by the readiness of the teachers to adapt their methods to the principles which are theoretically established and successfully used by those who are well prepared.

In methods of teaching, as in the curricula and courses of study, there is at the present time an opportunity for reform in the junior high school that will not come again after habits and traditions are established, as they are in the older types of institutions. What will be done with the opportunity depends in part on the teachers selected, but chiefly on the clarity of purpose and constant supervision by those professionally trained for the work.

CHAPTER VIII

TEACHERS AND SALARIES

THE success of any educational institution depends primarily on its teachers. Even when the purposes are clear, the courses of study well determined, the principles of discipline developed by experience, and traditions established, teachers make or mar the success of the organization. In the junior high school, where many details are relatively new and where in consequence much pioneering must be done, the importance of the teachers is correspondingly magnified. Superintendent Simmonds, of Lewiston, Idaho, says that "securing the proper teachers for the junior high school is a thousand times more vital than the curriculum." Moreover, the pioneering must be done in what Hollister, with the approval of the majority of schoolmen, calls "the most trying stage of common-school education." "A teacher [in the junior high school] needs far more resourcefulness, not only to meet the changeableness of youth wisely, but also to adapt various methods of presentation to individual capacities. A senior-high-school class is a far more homogeneous group than one in the junior high school."¹

Granting the difficulties of pioneering and the peculiar problems of early adolescence, when boys and girls become unusually restive, one would expect administrators, at the

¹ Assistant Superintendent E. Marie Gugle, *Prospectus for Junior High Schools*. Columbus, Ohio, 1915.

beginning of a junior high school, to make the most serious effort to acquaint the teachers with the definite purposes of the new institution, to reveal in a large way the possibilities, not only in the school as a whole, but in the special subjects of study, and to suggest some means for accomplishing the ends desired. One would expect, too, provisions in the beginning, at least, for the most careful supervision. Unfortunately these expectations have in no general way been satisfied. As already pointed out, many junior high schools have been established with an inadequate conception, even on the part of the administration, of purpose and possibilities; and there is abundant evidence that the majority of teachers in the new schools have been left largely to their own resources in determining and directing their work. That these teachers have had so large a measure of success is a tribute to their own initiative and good sense. The hope of the movement for reorganization lies partly in those teachers who have worked out the problem for themselves, but it lies even more in the schools in which there has been coördinated effort between administrators and teachers to develop plans looking toward clearly perceived goals.

The data in this chapter will tend to discourage a reader who has set the ideals of the movement high, especially if he fails to contrast them with the facts concerning teachers in schools of the older type of organization. Coffman,¹ from a study in 1911 of 5215 teachers in 17 States, draws the following conclusions:

¹ *The Social Composition of the Teaching Population*, pp. 79-80. There is also given, on pp. 80-81, a characterization of the typical female teacher.

The typical American male public-school teacher is twenty-nine years of age, having begun teaching when he was almost twenty years of age after he had received but three or four years of training beyond the elementary school. In the nine years elapsing between the age he began teaching and his present age, he has had seven years of experience, and his salary at the present time is \$489 a year. Both of his parents were living when he entered teaching and both spoke the English language. They had an annual income from their farm of \$700 which they were compelled to use to support themselves and their four or five children.

His first experience as a teacher was secured in the rural schools, where he remained for two years at a salary of \$390 per year. He found it customary for rural-school teachers to have only three years of training beyond the elementary school, but in order for him to advance to a town-school position he had to get an additional year of training. He also found that in case he wished to become a city-school teacher that two more years of training, or six in all beyond the elementary school, were needed.

His salary increased rather regularly during the first six years of his experience, or until he was about twenty-six years of age. After that he found that age and experience played a rather insignificant part in determining his salary, but that training still afforded him a powerful leverage.

In Bulletin 44 (1915) of the United States Bureau of Education are given data concerning the requirements for teachers in 1311 towns and cities with populations between 2500 and 30,000. There we are informed that only 69.2 per cent of these cities require their high-school teachers to be college graduates and that 54.6 per cent of them employ as high-school teachers college graduates without experience; that only 36.2 per cent require their elementary-school teachers to be normal-school graduates, and that 48.1 per cent of the cities will even accept as teachers graduates of high schools, and that 14.3 per cent of the cities employ high-school graduates without experience. Additional data,

of similar depressing effect, regarding the immaturity, preparation, and brevity of service of teachers are presented in Bulletin No. 3 by the National Education Association Commission on the National Program in Education, 1918; and since that date standards have been generally lowered because of the scarcity of teachers for the salaries offered.

State requirements for junior-high-school teachers. Several States have made official requirements or recommendations concerning the qualifications of junior-high-school teachers. In 1916 the California State Board of Education adopted regulations to the effect that

holders of elementary-school certificates who have completed two years of work in a college, or one year of work in a college in addition to a normal-school course, may teach in the third year of any intermediate-school course, provided they comply with the following regulations:

Candidates who are not graduates of normal schools must have completed at least sixty semester hours in regular college courses, including at least ten hours of pedagogy, and at least ten hours each in any three of the following departments: English, French, German, Spanish, Latin, History, Mathematics, Physical Science, Biological Science. Candidates who have had twenty months of experience are required to take only five units of pedagogy. Candidates who are graduates of accredited normal schools must have completed in regular college courses at least thirty semester hours, including at least ten hours each in any two of the subjects enumerated above.

The Minnesota State High-School Board in 1916 approved the recommendation that "graduates of the special three-year course of Minnesota State Normal Schools" be considered qualified to teach in junior high schools. The Ohio State Department of Education ¹ in 1917 decided that

¹ *The Junior High School: Manual of Requirements and Suggestions.* Columbus, 1917.

the scholastic attainments required of teachers of third-grade high schools shall likewise constitute the standards of scholarship required of teachers of junior high schools. It will be understood, however, that this training shall in all cases include special study of junior-high-school methods of teaching.

The attainments required of teachers of third-grade high schools are as follows:

All teachers shall be graduates of first-grade high schools, and in addition thereto shall have done at least one year of collegiate work or have scholastic attainment equivalent to that represented by the foregoing five years of training. All teachers should be continually growing professionally. . . .¹

Standards for teachers. New Hampshire, which for several years has been developing its extension of secondary education to six years, in Circular No. 1 states:

At this time it is impossible to obtain secondary teachers trained for their work. We will accept this situation for the present, but we must insist that teachers have no other capital defect beyond their ignorance of the teaching process. We have long demanded that they be satisfactory in character and in mentality. We must now insist that they have in addition sufficient maturity and experience to make them leaders of young people, and sufficient knowledge so that they may guide them. . . . Teachers must have a bachelor's degree from an approved college.

Among the exceptions made to the last requirement is that those "holding Grade B certificates may teach below the tenth grade," and those "who have one, two, or three years of post-secondary study in approved institutions may be approved to teach courses not above the corresponding years of the secondary program" — that is, in grades 7, 8, or 9.

With the development of departmental and differentiated

¹ *Ohio High-School Standards*, pp. 13-14.

work in the grammar grades a number of cities, whether they have junior high schools or not, have established an intermediate type of teachers' license. New York City has for years had its License Number 2. Boston has recently established its Intermediate certificate for teachers in junior high schools.

Teachers appointed to serve under this certificate will give instruction departmentally in the subjects they elect as majors. In general, the academic standards for this examination will be intermediary between those heretofore established for the Elementary-School, Class A certificate, and those for the High-School certificate. For instance, the major examinations in foreign languages will be of an academic standard equivalent to that established for the minor papers for the High-School certificate. Teachers of any modern foreign language in the intermediate classes must be equipped with a speaking knowledge. The oral tests in modern foreign languages, therefore, will be very critical.

The tests in mathematics will embrace the work of Grades 7, 8, and 9, in accordance with the newer viewpoint of teaching mathematics as a unit. . . . The examinations in science, in history and geography, and in English, likewise, will be in harmony with the work now undertaken in the intermediate classes, the basis of the tests being the courses of study that have already been prepared for intermediate classes.

Lewis, in his *Standards for Measuring Junior High Schools*,¹ proposed that

all teachers shall be graduates of a four-year high-school course or its equivalent. In addition they shall be graduates of a standard normal school with at least one year of practice teaching experience or they shall have had at least two years of college work, with preparation in the branches to be taught, with practice teaching experience. Furthermore, all teachers shall be required to have had two years of distinctive successful teaching experience, preferably in the grades, and show some evidence of professional interest,

¹ *University of Iowa Extension Bulletin*. 1916.

training, and study before being employed to teach in junior high schools. Better still, all should be college graduates, with practice teaching experience and one year of successful classroom experience in the grades. It is desirable that special preparation should be made during the college course to teach one or two subjects. The promotion of eminently successful teachers within the system shall be possible only for those who meet the above requirements.

Davis¹ demands

teachers in the junior-high-school grades as thoroughly trained and as efficient as those in the senior high school. Ultimately, yea, speedily, this means teachers with college degrees and professional training. It ought to mean, also, teachers of successful experience and with maturity of judgment. The task of introducing pupils for the first time to new lines of thought and responses calls for the highest possible skill. The young callow girl or boy, perfect it may be in the knowledge of the subject to be taught, but ignorant of the deeper meanings of life and life's relations, will serve the cause of education vastly better if put in charge of advanced courses than over beginners. From the typical young Ph.D. man in college and the typical young A.B. student in junior high school may the supervising authorities forever deliver the freshman student.

During the period of transition from the old system to the new, insistence on the employment of none but college-bred teachers would, however, be as unjust as it would be futile and impracticable. Old and faithful teachers may not be made to suffer nor be unceremoniously eliminated from the system. Time and opportunity for readjustments must be permitted. For those teachers in the seventh and eighth grades who are by temperament unfitted for departmental work transfers of position must be made. For others the assignment of such courses as they are amply fitted to teach effectively must be made. For all continued growth in service must be demanded. Hence leave of absence for such as seek it in order to fit themselves the better for the new work should be cheerfully granted by Boards of Education.

¹ *The Subject-Matter and Administration of the Six-Three-Three Plan of Secondary Schools. University of Michigan Bulletin, 1915.*

Gosling,¹ of the State Department of Education for Wisconsin, writes:

So far as the junior high school is concerned, the fitness of the teacher involves thorough scholarship, a large and generous and inspiring personality, adequate professional training, understanding of, and love for, boys and girls in their early adolescence, qualities of real leadership, and a broad social outlook which will result in positive service in the school and which will connect the school and its pupils with the social environment outside. . . . The distinguishing characteristics of junior-high-school teachers are that at their best they exhibit both broad human sympathies and sound scholarship and that they respond generously to the new social demands which a progressive educational program is making upon them. In other words, the successful junior-high-school teacher must combine the distinguishing qualities of the successful elementary teacher and of the successful senior-high-school teacher and in addition must have an unusual willingness and ability to respond to the opportunities for usefulness which only a broad social outlook and a keen sensitiveness to social obligations can give. . . .

The standards which have been fixed in the best schools have already been mentioned. They may be summarized as follows:

- (1) Graduation from a reputable college or university.
- (2) Professional training in a normal school or in a school of education connected with a university; or in lieu thereof, successful experience in teaching.
- (3) Understanding of, and sympathy with, adolescent boys and girls.
- (4) A clean, generous, and inspiring personality.
- (5) Qualities of real leadership.
- (6) A broad social vision and a keen sense of social obligations.

In 1918 the North Central Association of Colleges and Secondary Schools unanimously adopted the following recommendation of its Commission on Unit Courses and Curricula:

¹ Gosling: *The Selection and Training of Teachers for Junior High Schools*, pp. 169-70, 173, part 1, *Eighteenth Year-Book of National Society for Study of Education*.

1. The Commission recommends that the standard of preparation for the teacher of the ninth grade of the junior high school be the same as the standard now administered for secondary teachers by the North Central Association. An equally high standard of preparation for the teacher of the seventh and eighth grades of the junior high school should be insisted upon as soon as practicable.
2. It recommends as a maximum a daily school schedule of six full hours of study, recreation, or laboratory work, and five full hours as a maximum teaching schedule.
3. It sanctions a general policy of attempting to equalize more nearly the number of men and women teachers on the staff of the junior high school.

It is well to note at this point that these standards represent ideals. That they are not fully met by the teachers actually employed is easily explicable. Teachers in junior high schools probably conform to ideal standards quite as closely as do teachers in any other types of institutions.

So much for the requirements of teachers demanded or proposed. Douglass¹ quotes from superintendents a number of similar, but usually lower, standards. Two of the quotations are here reproduced. Superintendent Scofield, of Eugene, Oregon, wrote:

The successful junior-high-school teacher must have enough breadth of training or experience to be able to see, not only her own part of the course, but also where the pupil is coming from and where he is going after leaving the junior high school. My own experience has been that the teacher with the most varied experience and training is the one most valuable for this work. The teacher with a normal-school course rounded out by later college or university work would have an ideal training.

Superintendent Horn, of Houston, Texas, wrote:

¹ *The Junior High School.* 1916.

The matter of the qualification of the junior-high-school teachers is indeed a vital one. We have found from experience that those teachers who are university graduates, but who have for several years been successfully teaching in the elementary schools are decidedly more successful as junior-high-school teachers than are the university graduates whose teaching experience has been exclusively high-school work of the older type. . . . The chief reason seems to me to be that the average good teacher in the elementary school comes nearer having the right attitude toward her work than does the average teacher in the high school as it has been.

Whatever standards are set up, provided they be not mandatory, a superintendent is likely to select the best teachers that he can find, most probably in his own system, regardless of academic training or degrees. Of course he is usually limited in the amount of salary he can pay. As Superintendent Giles, of Richmond, Indiana, wrote: ¹

No set standard has been adopted as to qualifications of our teachers. We are frequently obliged to choose between an inexperienced teacher of good scholarship and one with successful experience, but less scholarship training. We decide each case on its merits, of course giving preference to the applicant with college training, if other conditions are at all equal.

Not infrequently higher requirements are made for teachers in the ninth grade, even though it is incorporated with the seventh and eighth grades in a three-year junior school. North Dakota ² permits teachers with normal-school training to be

employed in these reorganized schools for any work except the academic work of the four-year high-school course or such work in the ninth grade of the junior high school. Our certificate laws require that academic work such as is comprised in the usual four-year

¹ Douglass, p. 114. ² *State High School Inspector's Report.* 1917.

high-school course must be taught by teachers who are college graduates holding first-grade professional certificates.

Similar requirements prevail in several other states.

Sources of teachers. As may be suspected, the requirements for junior-high-school teachers depends largely on the organization of the grades. When all six years of secondary education are under one principal in one building, especially in small schools, the teachers are likely to be identical for both the lower and the upper years. When the junior high school includes only the seventh and eighth grades in a separate organization, the teachers are likely to be drawn largely, if not entirely, from the elementary-school staff. It is when the seventh, eighth, and ninth grades are organized together, especially when the school is large enough for the difference of salary between the elementary- and the secondary-school schedule, multiplied by the number of teachers involved, to be material, that the problem becomes complex. Davis reports ¹ that 30 per cent of the junior high schools in the North Central territory have the same requirements for teachers as do their senior high schools, and that 35.2 per cent of these schools have teachers who also give instruction in the upper school. As the average number of teachers in these 293 schools is 9.4, the conditions that he reports are symptomatic of high standards for the intermediate schools of the Middle West.

In the great majority of places it has been found advisable to place in the junior high school teachers selected from the upper elementary-school grades. For this there are several very cogent reasons, chief of which is that these teachers

¹ *School Review*, vol. 26, pp. 327-28.

were already in charge of the pupils who were for the most part to constitute the new school. Moreover, administrators generally hold that from these grammar-grade teachers they can select a number who are among the most skilled in the entire system and who are ambitious for what they consider a promotion. Their experience in the grades has given them an understanding of boys and girls in early adolescence and has made them appreciative of individual differences in abilities and sympathetic with any plans that will provide for differentiation of work. Whether or not they are by and large better teachers than others in the high school, as many maintain, it is unnecessary to consider, for they are usually eager to work in the new type of school, while the high-school teacher of however humble rank is likely to consider his transfer anything but a promotion. However illogical this feeling may be, it is human nature supported by American salary schedules. Fullerton¹ early took the position that this use of grammar-grade teachers in junior high schools would be a mistake as resulting in poor teaching and a lowering of scholarship, especially in the ninth grade. But superintendents have apparently preferred to assure themselves, first of all, of good teachers whom they knew and to risk the scholarship.² It must be noted that many teachers in the grammar grade have been prepared for work higher than they are doing and that the ambitious ones frequently have advanced, by continued

¹ Junior High Schools, Columbus, Ohio, *Superintendent's Report*. 1912.

² This assertion is supported by the statement of an appointment secretary of a college of education, that proportionately there have been few calls for junior-high-school teachers, even though the college has offered special courses to prepare them for the work.

study and other means, in one or more special subjects. A question that should in this connection be considered is whether administrators have always been fair to the elementary schools when they have promoted the best grammar-grade teachers to the junior high school while leaving the poor and the mediocre ones in unreorganized buildings.

Sex of teachers. Snedden ¹ voices the opinion of many when he asserted that "a certain proportion of men teachers should be assigned to departmental positions, not primarily because they are necessarily better teachers than women, but because it is desirable to introduce, in boys' classes at any rate, the influence of masculine personality"; and it has been argued that the introduction of junior high schools would result in a larger proportion of men teachers for children of early adolescence. Briggs ² asserted in 1914 that there was then in the junior high schools making report to the Bureau of Education "a considerably larger proportion of men . . . than is usually found in the seventh and eighth grades of the regular grammar school."

In the 265 junior high schools that reported for this study the number of teachers by sex, there were 845 men (25.2 per cent) and 2513 women (74.8 per cent). Only 21 of these schools had no men teachers. It is quite possible, however, that a majority of the schools not reporting had no men teachers; for it is a well-recognized fact that in questionnaire answers details are most frequently omitted when they are or seem to be unfavorable. The median number of men

¹ "Reorganization of Education for Children from Twelve to Fourteen Years of Age," *Educational Administration and Supervision*, vol. 2, pp. 425-33.

² *Report of the Commissioner of Education* (1914), vol. 1.

teachers per school is 1-4; for women teachers, 5-9; the distribution of the number of men and women teachers by schools is shown in Table XXXIV, which is to be read: "In 196 schools there are 1-4 men teachers; in 30, there are 5-9 men," etc.

TABLE XXXIV

SHOWING FOR 265 JUNIOR HIGH SCHOOLS THE NUMBER HAVING
VARIOUS NUMBERS OF MEN AND WOMEN TEACHERS

<i>Total number of teachers</i>	<i>Number of schools having</i>	
	<i>Men</i>	<i>Women</i>
1-4	196	106
5-9	30	69
10-14	12	36
15-19	4	21
20-24	1	14
25-29	1	5
30-34	0	7
35-39	0	3
40-44	0	3
50-54	0	1

The entire distribution of men teachers in the 265 junior high schools reporting is shown in Table XXXV. This shows no constant relationship between the size of schools and the proportion of men teachers; in each group the average percentage of men falls in the 21-30 step, and only in the schools of the largest size do we find none with more than half the teachers men.

There are no available data concerning the proportion of men teaching in unreorganized seventh and eighth grades, but there is abundant evidence that it is steadily decreasing. Reports of the United States Commissioner of Education afford data from which it may be calculated that in our

TABLE XXXV

SHOWING THE DISTRIBUTION OF MEN TEACHERS IN JUNIOR SCHOOLS OF VARIOUS SIZES

Total number of teachers in schools	Per cent of the schools having various per cents of men teachers								Total number of schools reporting
	0	1-10	11-20	21-30	31-40	41-50	51-60	61-70	
1-4.....	22.4	0	15.5	24.1	22.4	12.1	3.5		58
5-9.....	8.2	4.7	28.2	17.7	24.7	11.8	3.5	1.2	85
10-14.....	6.7	20.0	20.0	37.8	9.0	4.4	0	2.2	45
15-19.....	7.1	10.7	28.6	28.6	14.3	7.1	3.6		28
20-29.....		4.2	33.3	33.3	16.7	4.2	8.4		24
30-49.....		4.8	38.1	23.8	28.6	4.8			21
50-79.....		25.0	0	0	75.0				4
Totals...	9.4	7.2	24.9	25.3	20.8	8.7	3.0	0.8	265

This table is to be read as follows: Of 58 schools having 1-4 teachers, 22.4 per cent have no men teachers, 15.5 per cent have 11-20 per cent of men, 24.1 per cent have 21-30 per cent of men; etc.

elementary schools the percentage of men teachers has fallen from 42.8 in 1880, to 34.5 in 1890, to 28.9 in 1900, to 19.0 in 1910, to 16.9 in 1915, and to 13.4 in 1918. If the curve (shown on page 15) continues to fall without material change, we may expect the male teacher in the elementary school to be extinct shortly after 1930. Recent conditions have so bent the curve downward that, unless changed by factors that are not now operative, it will reach the baseline within a decade. The chart also shows that the percentage of men teachers even in the high school is decreasing at an alarming rate. The proportion of men teachers reported in junior high schools is, therefore, important and encouraging.

Davis¹ found that the 2760 teachers in the 293 junior high schools of the North Central Association were distributed as shown in Table XXXVI.

TABLE XXXVI

SHOWING FOR 293 JUNIOR HIGH SCHOOLS OF THE NORTH CENTRAL ASSOCIATION THE NUMBERS AND PERCENTAGES OF MEN AND WOMEN TEACHERS

	Number	Per cent
Academic men	352	12.8
Vocational men.....	<u>338</u>	<u>12.2</u>
 Total men	 690	 25.0
 Academic women.....	 1592	 57.7
Vocational women.....	<u>478</u>	<u>17.3</u>
 Total women.....	 2070	 75.0

Educational training. What is the proportion of junior-high-school teachers who are graduates of colleges? In the 266 schools returning data for this question there were 3338 teachers, an average of 12.5 and a median of 9 to the school. Of these, 1621, or 48.6 per cent, were college graduates. Forty, or 15.0 per cent, of the schools, had none but college graduates in their corps, and 31, or 11.7 per cent, had no college graduates at all.

The size of the school seems to have little influence on the proportions of college graduates in the teaching corps. So far as a tendency is revealed by the grouping in Table XXXVII, the smaller the school the better prepared its teachers seem to be, until the largest group, which takes a median position.

¹ *School Review*, vol. 26, p. 326.

TABLE XXXVII

SHOWING THE PROPORTION OF COLLEGE GRADUATES IN JUNIOR HIGH SCHOOLS GROUPED ACCORDING TO SIZE

<i>Number of teachers in corps</i>	<i>Number of schools</i>	<i>Total number of teachers</i>	<i>Total number of college graduates</i>	<i>Per cent of college graduates</i>
1-5.....	82	287	166	57.9
6-11.....	82	660	337	51.1
12-21.....	55	850	406	47.8
22-36.....	31	835	366	43.8
37-70.....	16	706	346	49.0
Total.....	266	3338	1621	46.8

These data reveal a distinctly encouraging situation. The 266 schools that reported on this item have very materially increased the proportion of college graduates for the instruction of their pupils in early adolescence. When it is recalled that to a large extent junior high schools were staffed with teachers who had already proved their worth by efficient service, we cannot but conclude that the junior high school has made a distinct contribution toward raising the standards of teachers in the intermediate period. Moreover, the situation is likely to grow better in established schools, for a number of administrators have volunteered statements in entire harmony with the following quotation from Superintendent Barker, of Oakland, California:¹

While nearly all the teachers employed at the time of the change to the departmental plan were retained, a large proportion of the new teachers appointed are college graduates with successful ex-

¹ *The Intermediate School Situation in Oakland.* 1917.

perience in elementary as well as in high schools. . . . At the present time approximately one half of the teachers in the seventh and eighth grades where the departmental method is employed are college graduates with sufficient graduate training to meet the state requirements for high-school certification.

Evenden¹ found from the returns of 167 cities that the median requirement of academic and professional training above the eighth grade for junior-high-school teachers was 6.44 years. If his 167 cities are similar to the 266 returning data on the teachers employed in 1917, the difference means either that schools actually secure teachers somewhat better prepared than the requirements demand or that there had been a considerable falling-off in quality during two years. The complete distribution of the requirements of Evenden's 167 cities is shown in Table XXXVIII. There was no considerable variation from the median by any section of the United States.

TABLE XXXVIII

SHOWING THE NUMBER OF YEARS IN ACADEMIC AND PROFESSIONAL PREPARATION ABOVE THE EIGHTH GRADE WHICH IS PREREQUISITE TO ELECTION IN THE INTERMEDIATE SCHOOLS OF 167 CITIES REPORTING IN 1819.

Years of preparation beyond the eighth grade	Number of schools	Years of preparation beyond the eighth grade	Number of schools
0	0	7	3
1	1	8	12
2	8	9	2
3	2	4-6	1
4	11	6-8	10
5	7	Varied	13
6	97		

¹ *Teachers' Salaries and Salary Schedules in the United States, 1918-19*, p. 62.

Special training. The number of junior-high-school teachers that have had special training for their work is small. Twenty schools report that they had 1 to 4 teachers specially trained in colleges for junior-high-school work, and five schools report 5 to 9 such teachers. All of the teachers in two of the schools were specially trained in college courses for their work. Although only 206 schools returned data on this point, there is no reason to believe that the percentage of schools with such specially prepared teachers (12 per cent) would materially rise if all the schools had reported.

Vermont held a special series of institutes under the charge of the State Supervisor of Junior High Schools when it was decided to extend secondary education there in accordance with the recommendations of the Educational Survey; and several cities have conducted classes for the preparation of teachers who were already in service in other positions in the system. Boston, for instance, provided courses in the teaching of English, mathematics, history, geography, and science, which were attended by at least one teacher in each district. From those attending the courses have been chosen heads of departmental work.¹ No wiser plan has been made public than that devised by Superintendent H. S. Weet at Rochester, New York: ²

Once it was decided to select experienced grade teachers, the problem of intelligent selection presented itself. Accordingly, one year before the junior high school was to open, a series of Saturday morning institutes was begun. Classes were organized in Latin, German, English, elementary science, and mathematics. These were for applicants for teaching positions in the academic course.

¹ *Superintendent's Report.* 1917.

² National Education Association Bulletin 4, 1916, No. 6, p. 151.

Specially trained teachers were available for the commercial and household- and industrial-arts courses, though Saturday morning institutes were organized and carried on through the year in these courses also. The major emphasis in these latter was on courses of study.

To these courses every experienced grade teacher in the system who met the minimal requirements and who cared to apply was admitted. Every applicant for a position as teacher of mathematics in the junior high school was required to have had, for example, the full mathematics courses of the upper high school. To continue with the subject of mathematics, as illustrative of the principle which prevailed in these institutes, three definite things were accomplished. In the first place, an opportunity was given for drawing up in outline a course of study in general mathematics for the eighth grade or second year of the junior high school for pupils of the academic course. . . . The institute was in charge of the head of the department of mathematics in the high school to which the pupils of this particular junior high school would go. . . . In the institute class, on the other hand, were the experienced grade teachers with their knowledge of the capacities and limitations of upper-grade study. . . . In the second place, these institutes gave to the grade teachers an opportunity for subject-matter review in algebra and geometry. And, lastly, the work of the teachers in these institutes constituted one important factor in the ultimate selection of teachers. What has been said of this course in general mathematics was equally true in principle of each of the other courses.

Of 163 places reporting, 19 have in their junior high schools teachers specially prepared in classes locally conducted. The number of such teachers is shown in Table XXXIX. Of these 19 cities or towns have trained all of their teachers by means of local classes.

The growing importance of the junior high school and the educational possibilities in it have led a number of universities, colleges, and normal schools to offer courses for the special preparation of administrators and teachers. A sum-

TABLE XXXIX

SHOWING THE NUMBER OF TEACHERS IN JUNIOR HIGH SCHOOLS
SPECIALIY PREPARED IN CLASSES CONDUCTED BY THE CITY
SYSTEM

<i>Number of teachers</i>	<i>Number of schools</i>
0	144
1-4	10
5-9	5
10-14	1
15-19	1
20-24	2
Total	163

mary of the courses offered may be found in Part I of the *Eighteenth Year-Book of the National Society for the Study of Education*, pp. 179-87.

Three of the Massachusetts State Normal Schools — Bridgewater, Fitchburg, and Salem — began in 1915 to offer three-year curricula for the training of teachers for junior high schools. Stacy outlined a proposed curriculum for normal schools in *Educational Administration and Supervision* (vol. 2, pp. 448-55), and developed it somewhat further in the same magazine (vol. 3, pp. 343-50). His curriculum includes:

(1) A general foundation for the first year, (2) specialized work on majors and general work on minors for the second and third years. The groups we have adopted, each subject in a group being a major, are these:

1. Geography, history, and civics.
2. Geography, science (general).
3. Mathematics, science.
4. English, history, and civics.
5. English, geography.
6. English, a modern language.

7. Special combinations of any of the above subjects with gardening or playground activities or athletics.

The student elects one group. The required professional studies, psychology, school management, practice teaching, etc., are also majors.

Experience. It is important to know the previous experience of junior-high-school teachers as well as their training. Only from 177 to 221 schools furnished replies to the several questions under this head; and unfortunately there are not even the smaller number who answer all of the five questions.

One hundred and ninety-eight schools report concerning the number of teachers who have come to them without experience directly from normal schools. One hundred and forty-one, or 71.2 per cent, had no such teachers; 54 had 1 to 4; and three had 5 to 9. Two hundred and thirteen schools report the number of teachers who have come to them without experience directly from college. One hundred, or 47.0 per cent, had no such teachers; 110, or 51.6 per cent, had 1 to 4; two had 5 to 9; and one had 25 to 29. So far as these answers are representative, it is obvious that junior high schools draw their inexperienced teachers much more largely from colleges than from normal schools; but an examination of the complete data shows that the proportion of inexperienced teachers in junior high schools is small. Evidently, again, administrators place their confidence for pioneering in teachers whom they believe successful in practical work.

Evenden¹ found that 30 per cent of intermediate schools reporting to the National Education Association require one year's experience, 42 per cent require two years', and

¹ *Teachers' Salaries and Salary Schedules in the United States, 1918-19*, p. 60.

12 per cent require three. The average experience of 473 teachers in 120 schools was 7.5 years.

Inasmuch as Los Angeles is one of the cities in which the intermediate-school teachers were early put on the high-school salary schedule, it is interesting to consider the training and experience of the teachers there. The data are all derived from the tables given in the Report of the Advisory Committee to the Board of Education of the City of Los Angeles, 1916.

Of 300 intermediate-school teachers, 134 had the regular high-school license, and 146 had a special high-school license, which was issued to make them eligible for intermediate-school work.

Table XL shows the per cent of 1212 elementary-school teachers, of 278 intermediate-school teachers, and of 500 high-school teachers in Los Angeles who had attended college or university for four years and who held college or university degrees. The larger percentage holding degrees

TABLE XL

SHOWING PER CENTS OF LOS ANGELES TEACHERS ATTENDING
COLLEGE FOUR YEARS AND HOLDING DEGREES

	<i>Elem.</i>	<i>Interm.</i>	<i>H.S.</i>
Attending college four years.....	6.0	29.5	39.6
Holding degrees.....	8.9	43.5	68.4

than attending college four years is presumably due to the fact that a number of degrees were secured by less than four years of study, probably supplemented by Saturday and summer sessions and correspondence courses. The inferiority of the preparation of the intermediate-school teachers to that of the high-school teachers is clearly indicated in this

table; a study of the detailed data, however, shows that it is even greater than here appears, inasmuch as the high-school teachers have done considerably more advanced study and hold a number of graduate degrees.

The Los Angeles teachers are, with the exception of an all but negligible fraction, experienced; and the amount of experience does not differ materially in the three types of schools, the median in each group being 10 to 15 years. The distribution is shown in Table XLI.

TABLE XLI

SHOWING BY PER CENTS THE AMOUNT OF EXPERIENCE OF
LOS ANGELES TEACHERS

<i>Years of experience</i>	<i>Elementary schools</i>	<i>Intermediate schools</i>	<i>High schools</i>
$\frac{1}{2}$ -1	2.5	1.1	1.0
2-3	9.7	7.5	6.6
3-5	12.2	10.8	8.4
5-10	25.1	26.3	28.2
10-15	24.0	24.1	23.4
15-25	20.4	27.7	27.2
Over 25	7.0	2.5	5.2

Medians . . . 10 yrs., 1.3 mo. 10 yrs., 10.7 mo. 11 yrs., 2.9 mo.

Salaries. A comparison of the intermediate- and high-school teachers in Los Angeles as to salaries is given in Table XLII. Although the median salary of each group is the same, \$1680, the average of the high-school salaries is considerably higher. This is due partly to the fact that, as these schools have been established longer, more of their teachers had reached the advanced steps in the schedule, and partly to the inclusion of the well-paid heads and sub-heads of departments.

TABLE XLII

SHOWING THE NUMBERS AND PER CENTS OF INTERMEDIATE-SCHOOL TEACHERS AND HIGH-SCHOOL TEACHERS RECEIVING DIFFERENT SALARIES IN LOS ANGELES

Grades of salary	Numbers receiving		Per cents receiving	
	Intermediate schools	High schools	Intermediate schools	High schools
\$1200.....	9	6	3.2	1.2
1260.....	12	12	4.3	2.4
1320.....	14	19	5.0	3.8
1380.....	16	19	5.8	3.8
1440.....	20	25	7.2	5.0
1500.....	17	33	6.1	6.6
1560.....	19	33	6.8	6.6
1600.....	15	23	5.4	4.6
1640.....	15	21	5.4	4.2
1680.....	141	255	50.7	51.0
1740-2100.....	0	23	0.0	4.6
2160.....	0	30	0.0	6.0
Totals.....	278	499	99.9	99.8
Median salary	—	—	\$1680	\$1680

The Survey Committee recommended that the academic standard for intermediate-school teachers be raised. It seemed to be the majority opinion of the Los Angeles school people in 1917 that the former superintendent had made a mistake in placing intermediate-school teachers on the high-school salary schedule without at the same time demanding the full requirements for high-school certification.

A number of others besides Superintendent Francis, who established intermediate schools at Los Angeles, have advocated with cogent arguments that teachers of the new type

of institution should be put on the same salary schedules as high-school teachers. Typical of these is Gosling, who, after several years' experience as principal of a junior high school at Cincinnati and later as supervisor in Wisconsin, says:

In the meantime the tendency manifest in some places to establish a salary schedule that is intermediate between the schedule of the elementary school and that of the senior high school is to be resisted strongly, because it not only fails to recognize the importance of the junior high school and the significant contributions of its teachers to the development of a difficult piece of work, but also it strikes at the stability of the new institution by the subtle suggestion to teachers that they may regard their position merely as a stepping-stone to the safe berth and the higher salary which the senior high school offers. In other words, the intermediate salary created a condition of unstable equilibrium, whereas fixedness, firmly based in high purposes persistently followed, is needed to develop the junior high school up to the full measure of its possibilities.¹

Owing to the difficulties of securing accurate and complete information by means of a questionnaire, there has been no attempt to make a study of the relative salaries paid throughout the country to teachers in elementary, intermediate, and high schools. The following conclusions are, however, believed to be generally justified. First, in a majority of genuine junior high schools the teachers are paid somewhat more than teachers in elementary schools and somewhat less than those in the high school. Second, in a smaller number of junior high schools, especially in those that have made few or no significant changes, the salaries tend to be the same as those paid to grammar-grade teach-

¹ *The Selection and Training of Teachers for Junior High Schools, loc. cit., p. 172.*

ers. Third, in the smallest group of independently organized junior high schools the salaries are the same as for teachers in the senior high school.

In his study for the National Education Association, Evenden found the median salary for junior-high-school teachers (392 cities reporting) to be, in 1918-19, \$951, while the medians for elementary-school and high-school teachers were \$856 and \$1224 respectively. Fifty per cent of the junior-high-school teachers received between \$768 and \$1134. The wide range of medians for cities of different size is shown in Table XLIII. The geographical range is from \$832 in the Southern States, through \$962 in the Great Plains, to \$1000 in the Far West.

TABLE XLIII

MEDIAN SALARY OF JUNIOR-HIGH-SCHOOL TEACHERS IN CITIES OF
VARIOUS SIZES (1918-19)

<i>Size of cities</i>	<i>Number of teachers</i>	<i>Median salary</i>
More than 100,000	421	\$1226
50,000-100,000.	169	1007
25,000-50,000.	487	1047
10,000-25,000.	420	948
5,000-10,000.	380	775
Under 5,000	309	738
Total.	2186	\$951

Davis¹ reports that 31.4 per cent of the junior high schools in the North Central territory have the same salary schedule as do the high schools. This large percentage is probably due to a number of six-year secondary schools in which the same teachers give instruction in all grades. Almost every

¹ *School Review*, vol. 26, p. 328.

conceivable practice has been found. The simple fact is that few communities have been willing materially to increase the salaries of teachers for the intermediate grades, on reorganization, even though there be apparent need and educational advance assured by so doing.

CHAPTER IX

THE ADMINISTRATION OF THE SCHEDULE AND OF CLASS UNITS

A. LENGTH OF PERIOD, OF DAY, AND OF WEEK

THE junior high school has resulted in a material increase in the length of class period for pupils in the seventh and eighth grades. The median length of period for 277 junior high schools is 40 to 44 minutes, with 69.2 per cent of the schools having periods not shorter than 35 minutes or longer than 49. Douglass¹ found almost the same conditions. The median length of period for 149 junior high schools reporting to him was 40 minutes, with 59.7 per cent of the schools having periods not shorter than 35 minutes or longer than 49.

The median length of period for upper grades in elementary schools of 198 places is 30 to 34 minutes; for junior high schools in 277 places, 40 to 44 minutes; and for high schools in 228 places, 45 to 49 minutes. The complete distribution is given in Table XLIV.

From a comparison of returns from 165 school systems that have been reorganized, it is found that in 11.5 per cent of the places the junior high school has class periods of the same length as the elementary schools; in 53.3 per cent of the places, it has periods of the same length as the high schools; in 6.7 per cent of the places it is reported to have periods even longer than those in the corresponding high schools,

¹ Part III, *Fifteenth Year-Book of the National Society for the Study of Education*, p. 98.

TABLE XLIV

LENGTH OF PERIODS IN ELEMENTARY SCHOOLS, JUNIOR HIGH SCHOOLS, AND SENIOR HIGH SCHOOLS

<i>Length in minutes</i>	<i>No. elementary schools</i>	<i>No. junior high schools</i>	<i>No. senior high schools</i>
15-19.....	3	0	0
20-24.....	33	0	0
25-29.....	55	7	0
30-34.....	66	31	2
35-39.....	5	40	14
40-44.....	13	113	108
45-49.....	7	35	56
50-54.....	5	13	13
55-59.....	4	16	14
60-64.....	3	18	18
65-69.....	0	0	1
70-74.....	0	0	1
75-79.....	0	0	0
80-84.....	0	0	0
85-89.....	0	0	1
90-94.....	0	0	0
94-99.....	0	1	0
Variable.....	4	0	0
Total.....	<u>198</u>	<u>274</u>	<u>228</u>
Medians.....	30-34	40-44	45-49

probably because of supervised study. It is evident that the junior high school is increasing the length of class period.

The junior high school also has tended to lengthen the school day. The median net length of the school day in elementary schools of 239 places is 300 minutes; that for junior high schools in 269 places is 320 minutes; and that for senior high schools in 236 places is likewise 320 minutes. Only 14.5 per cent of the junior high schools have a day less than the median length for elementary schools, 300 minutes.

TABLE XLV

NET LENGTH OF SCHOOL DAY IN ELEMENTARY SCHOOLS, JUNIOR HIGH SCHOOLS, AND SENIOR HIGH SCHOOLS

<i>Net length in minutes</i>	<i>No. elemen- tary schools</i>	<i>No. junior high schools</i>	<i>No. senior high schools</i>
150.....	1	1	1
200.....	1	1	3
230.....	1	0	0
240.....	4	0	2
250.....	5	1	0
260.....	6	3	4
270.....	18	6	14
280.....	39	18	14
290.....	10	9	5
300.....	81	52	30
310.....	20	31	27
320.....	7	20	23
330.....	28	41	38
340.....	7	30	18
350.....	0	15	10
360.....	8	30	29
370.....	1	4	5
380.....	1	1	0
390.....	1	3	6
400.....	0	1	2
420.....	0	1	2
450.....	0	1	1
Variable.....	0	0	2
Total.....	239	269	236
Medians.....	300	320	320

The Springfield study found that in 73 junior high schools the length of the day, presumably including lunch periods and intermissions, ranges from 300 to 450 minutes, with a median at 345. Of 55 schools, most of them in session less than 360 minutes, 31 think the day should be longer. The

report states that "the six-hour (360-minute) day apparently is most satisfactory."

The complete distribution for the schools of this study is given in Table XLV.

From 205 systems were received returns as to the normal length in minutes (exclusive of lunch period and recesses) in elementary schools, junior high schools, and senior high schools. These returns show that in 27.3 per cent of the 205 places the junior high school has a net school day the same as its elementary schools; in 63.9 per cent of the places it has a day of the same length as the high schools; and in 20 per cent of the places it has a day even longer than that of the high schools. The junior high school, then, is tending to increase the length of the school day for pupils of early adolescence.

The number of periods constituting the week's work was reported by 265 junior high schools. The range is astonishingly large — from approximately 500 minutes to the almost incredible 2880 minutes; the median number of periods, of whatever length they may be, remains almost constant at 25 to 29. 40.5 per cent of the schools have fewer than 25 periods a week, and 27.0 per cent have more than 29. The Springfield study, found in 67 junior high schools that the number of periods ranges from 20 to 45, with a median at 35.

It is a common practice to assign to what seem to be the less important subjects in the curriculum fewer than five class periods a week. Whether or not the smaller number of meetings represents the relative importance of the subjects seeking a place in the school, it does enable a principal to give the subjects some recognition and at the same

time make a program that extends over something less than twenty-four hours a day. An objection frequently urged against this practice is that much time is lost at the infrequent meetings in the warming-up process. Of 274 junior high schools reporting on this topic, 209 (76 per cent) have classes that meet less often than four times a week. Of the 209, only 197 report as to whether such an abbreviated program for a subject is satisfactory; 145 (73.6 per cent) say that it is satisfactory; 27 (13.7 per cent) say that it is partly satisfactory; and 25 (12.7 per cent) say that it is unsatisfactory. Careful measurement should be made of the amount learned and the amount retained by similar pupils in the same amount of time differently distributed. The matter is too important to be left to uncertain "impressions."

B. SIZE OF CLASSES

What size of class is ideal for education has never been determined, though on the basis of experience principals of elementary schools seek to limit their classes to approximately 35 pupils. In high schools the North Central Association of Colleges and Preparatory Schools recommends as a maximum 25 pupils to a class and states further that "no recitation class should enroll more than 30 pupils." These standards are very generally accepted. From an administrative point of view, no class should be permitted to fall much below the standard; otherwise the per capita expense of the school rapidly mounts up. This administrative ideal becomes more and more impossible of attainment as the size of the school diminishes or as the number of electives is increased; therefore, as has been shown elsewhere, one potent

argument for the junior high school in cities is that in it may be congregated enough pupils to be more or less evenly divided by the normal class size for elective subjects.

For our study a large number of junior-high-school principals recorded the number of their classes containing 1 to 9, 10 to 14, 15 to 19, etc., pupils, while others gave only the average number of pupils per class. All of the 247 returns have been grouped according to the size of the school, and the results, in Tables XLVI and XLVII, present according to the enrollment the percentage of classes in 165 junior high schools with fewer than 16 or more than 44 pupils.

It has been thought unwise to make a statistical study of the figures in these tables, the organization even of the schools in the same population group varying so widely. It

TABLE XLVI

SHOWING THE NUMBERS OF JUNIOR HIGH SCHOOLS HAVING VARIOUS PER CENTS OF CLASSES WITH MORE THAN 44 PUPILS IN A CLASS (165 SCHOOLS)

Per cent of classes	Size of school—Number of pupils enrolled															Total
	1-99	100-199	200-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1099	1100-1199	1200-1299	2000-2500		
0	27	35	19	17	11	6	4	4	..	2	1	..	1	1	1	128
1-4	..	5	3	2	2	1	..	1	1	..	..	..	1	1	..	17
5-9	1	2	2	..	1	..	1	..	..	1	..	..	..	1	..	9
10-14	1	..	1	1	..	1	1	..	..	..	..	..	..	..	..	5
15-19	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
20-24	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	3
25-29	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30-34	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
100	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Totals	30	44	28	20	14	8	6	5	1	3	1	1	3	1	1	165

Table to be read as follows: Of schools having enrollments of fewer than 100 pupils (1-99) 27 had no classes with more than 44 pupils, 1 had from five to nine per cent of its classes with 44 pupils or more each, etc.

TABLE XLVII

SHOWING THE NUMBERS OF JUNIOR HIGH SCHOOLS HAVING VARIOUS PER CENTS OF CLASSES WITH FEWER THAN 16 PUPILS IN A CLASS (165 SCHOOLS)

Per cent of classes	Size of school — Number of pupils enrolled														Total
	1-99	100-199	200-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1099	1100-1199	1200-1299	2000-2500	
0	9	13	9	12	3	1	1	1	..	1	..	..	2	..	52
1-4	..	1	4	1	1	..	1	..	..	1	..	..	1	10	
5-9	1	3	4	2	4	3	1	3	1	1	..	1	..	..	24
10-14	1	9	3	1	3	3	3	..	1	..	..	..	..	..	24
15-19	..	2	1	2	2	..	..	..	..	..	..	..	..	..	7
20-24	3	6	2	2	..	..	..	..	..	..	..	..	1	..	14
25-29	2	1	3	..	..	1	..	..	..	..	..	..	..	..	7
30-34	2	2	1	..	..	..	..	..	..	..	..	..	..	..	5
35-39	..	1	1	..	1	..	..	..	..	..	..	..	..	..	3
40-44	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
45-49	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
50-54	3	2	..	..	..	..	..	..	..	..	..	..	..	..	5
55-59	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
60-64	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65-69	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
70-74	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2
75-79	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
80-84	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
85-89	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
90-94	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
85-99	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
100	4	1	..	..	..	..	..	..	..	..	..	..	..	..	5
Totals	30	44	28	20	14	8	6	4	2	2	1	1	3	1	164

Table to be read as follows: Of schools having enrollments of fewer than 100 pupils (1-99) nine had no classes with fewer than 16 pupils per class, one school had from five to nine per cent of its classes with fewer than 16 pupils each, etc.

is very near meaningless to say that in one group of schools the average size of class is 30 pupils, the entire range is from 10 to 47 pupils, and fifty per cent of all the classes have from 21 to 38, unless at the same time are given the curricula of the schools, the influences working for and against each, the subjects that have classes of various size, etc. From the data included here much information can be gained to satisfy students of several phases of this topic. Therefore the tables are presented without further comment.

CHAPTER X

SOCIAL ORGANIZATION AND CONTROL

IT has been generally recognized as unfortunate that there is frequently at the beginning of the high-school period a sharp change from the atmosphere and type of social control found in the elementary grades. To remedy this is one of the purposes of the junior high school: here, it is argued, pupils, similar in age and nearer in ideals and ambitions to the twelfth grade than to the first, will, while more or less segregated, receive a treatment more suited to their development; that among them a becoming and stimulating spirit will be developed, and that discipline will be easier. While changing from childhood to youth, "boys and girls are prone to be critical of their elders, yet childlike and imitative. They are at the age when hero-worship is a great factor in their development."¹ Because of such characteristics it is important that they be "kept boys and girls a little longer" somewhat apart from the dominating influences of older youth, and thus have the opportunity to develop normally. They will need extra-curricula activities suited to their age, and systematic, personal, educational, and vocational guidance.

There can be no question that by and large the junior high schools are paying much attention to the needs of individual pupils and to the development of group spirit. The success of the efforts seems to result from the selection of teachers

¹ Francis: *Elementary School Journal*, vol. 15, p. 363.

who for the most part are interested in boys and girls of early adolescence and who are able to sympathize with their demand for a recognition of growing personality and yet to direct it rather than to be dominated by it. It may be the effect somewhat of novelty, but a pleasant and stimulating spirit pervades the junior high school. Observation in many places confirms such testimony of teachers and of principals as this from Superintendent Hughes, of Chanute, Kansas: "A group spirit has arisen in our junior high school which was never experienced in the old schools of eight grades."¹ Superintendent Farmer, of Renville, Minnesota, writes that he has just as good discipline and order as before combining grades seven, eight, and nine in two rooms, besides achieving "a real development of democratic initiative which leads to the cultivation of self-confidence and resourcefulness."

Profession is very general that the type of discipline and control in junior high schools is midway between that of the elementary grades and that of the senior high school. A typical statement is that by Superintendent Bostwick, of Clinton, Iowa:

The chief of the advantages is that the pupils in this building are all about the same age, the one class just closing the graded department and the other beginning the high school, making the organization and interest quite close. We are able to carry out a policy in the management of the school which is midway between the rigid, strict disciplinary management of the graded department on the one hand, and the greater personal liberty policy on the other. The pupils are looked after more closely in the beginning stages of their new work and are helped and supervised more than usual in their new studies.

¹ *Educational Administration and Supervision*, vol. 1, p. 617.

A visitor to a number of junior high schools is impressed that this ideal is general and that it is to a large extent successfully carried out. There are, of course, junior high schools in which the elementary-school discipline and control are continued even through the ninth grade, thus causing the same embarrassment of adjustment for their pupils when they are transferred to a higher school; and there are others in which the more severe discipline and control of the senior high school is sharply introduced at the beginning of the seventh grade. But both the ideal of achieving a middle course by way of transition, and also the natural tendency of teachers to adjust themselves to the needs and maturity of their pupils, tend toward a gradation. It can hardly be denied that in this field the junior high school is achieving one of its most marked successes.

Numerous schools testify to the fact that the change in discipline cannot, because of the habits of teachers and pupils, be immediately made. From Cleveland comes this: "The teachers say that pupils seem to find it rather more difficult to adjust themselves to the different kinds of recitation than when they recited to the same teacher in all subjects. So far as conduct goes, if all the teachers are strong there is no more disciplining to do than formerly. The little rest in passing from room to room and the contact with different personalities seem conducive to greater harmony in class." And Norfolk, Nebraska, reports that "discipline was harder at first until the pupils became used to it." Such reports are wholesome evidence that in junior high schools a change is made from the type of administration in the elementary grades; and the probability is that because of the

emphasis on individual needs for guidance, the adjustment is better taken care of both here and when the pupils go on to the senior high school than under the old plan.

Of the 293 junior high schools in the North Central Territory, 65.9 per cent reported to Davis ¹ that their principles of discipline were freer than in the elementary schools, and 50.5 per cent reported that their principles of discipline were less free than in the senior high school. These figures bear out the statement that the majority of junior high schools are attempting an intermediate type of control.

Of 259 junior high schools that answered for this study the question "Is discipline easier or harder than under the old organization?" 186, or 71.8 per cent, say that it is easier; 32, or 12.3 per cent, say that it is harder; 34, or 13.1 per cent, say there is not much difference; four have no difficulty; and three state that the discipline is harder in the seventh grade and easier in the eighth and ninth.

Self-government. A great deal has been written of adolescence and its characteristics,² but a complete, systematic translation of erudite studies into everyday practice remains to be made. Such adaptations of school government as exist seem based primarily on common sense and sympathy. Although adolescence has been shown to come on gradually, beginning at different ages for different individuals, both science and common-sense judgments agree that there is need of special care for the boy and girl in this period, "the most unlovely and yet the most in need of

¹ *School Review*, vol. 26, p. 328.

² See especially Hall: *Adolescence*, 2 vols.; Whipple, chap. vii in Monroe's *Principles of Secondary Education*; and Inglis, chaps. i-ii in his *Principles of Secondary Education*.

love." Segregation permits and encourages provisions for the peculiar characteristics of the child who, more rapidly than his elders usually appreciate, is developing a sense of his own importance and a desire for initiative and self-control. In the junior high school without the undue influence of older youth he can gradually be granted privileges as he develops responsibility and under guidance prepared better for self-control. A supporting analogy in provision for gradual adjustment of groups to new privileges is found in the Harvard dormitories for freshmen, and in the close oversight provided for incoming students at Chicago, Columbia, and a number of our other great universities.

Complete self-government, as every one knows, is really non-existent in any secondary school. Pupils of this age are not competent, nor should one expect them to be, entirely to control either themselves or others. But this does not mean that partial and a gradually increasing amount of self-government is not desirable; indeed, it is difficult to see how any one can effectively be taught an intelligent leadership of others or control of himself without directed practice. Some form of self-government has been observed in a number of junior high schools; so far as could be told by a brief inspection the report of the principal that it works more or less well is confirmed. The degree of success is determined chiefly by the interest, the close attention, the wisdom, and the personality of the adult furnishing the oversight.

The criterion of the ultimate worth of any plans of pupil government is the conduct of the individuals on the streets, in the homes, and in higher schools or business. If there it is unaffected by the practice in classrooms or if it is automatic

but unintelligent obedience to all kinds of "authority," the schools have largely failed in their work, whatever of facts and figures they may have taught.

In one junior high school in New York City a modified form of self-government was undertaken with the purpose of affecting both immediately and ultimately the conduct of the pupils in their lives outside the school. The inculcation of ideals, the opportunities for self-control and leadership, and the habits of intelligent coöperation were sought through the organization of the pupils into groups, each one directed by an elected leader who had previously qualified himself by meeting certain standards that the boys had set up. The program for each group was worked out in a Leaders' Club, with which one or more of the teachers constantly advised.¹ The results of this directed organization showed itself in the school, in the outside play, and in the higher schools and work which after graduation the pupils entered. There was so much loyalty to the ideals developed that for several years afterward the boys returned to regular and frequent alumni meetings for the purpose of adapting the "creed" to their new conditions and of helping each other better live up to it.

The achievements of the boys who entered the city high schools were on the whole highly satisfactory, in that they adjusted themselves quickly and easily to the form of administration there, entered vigorously into the extra-curricula activities, and attempted to carry on their habits of initiation and leadership. Unfortunately, a few individual high-

¹ See Fretwell: "An Experiment in Democracy," *Teachers College Record*, vol. 20, pp. 324-52.

school teachers, as perhaps would happen anywhere, ridiculed these attempts and discouraged anything except obedience to explicit directions emanating from themselves. This leads to the suggestion that any plan of socialization attempted in the intermediate school should be extended to include the teachers in higher schools who may later have charge of the pupils. To insure success, both the articulating intermediate school and the high school should have similar ideals of social control.

Of the self-government in Los Angeles, Superintendent Francis wrote:¹

The grouping together of the seventh, eighth, and ninth grades has placed in one school boys and girls of about the same age, tastes, and interests. This has made possible some form of student government in each school whereby students assume control of various activities under their own officers and student administration. The policy here stated is in line with the present-day feeling that if our democracy is to prosper, the beginnings must be laid in the public school, and students must early be taught the duties and responsibilities that fall upon the individual in a democracy. The adolescent child is at a most impressionable age, and the ideals developed at this time are enduring in character.

All of the intermediate schools have placed certain phases of school administration and school activity under student control, differing in each locality according to the varying conditions that are encountered. It is the consensus of opinion that there has arisen in pupils a better attitude toward school, and a greater desire to coöperate in those things that make for a more wholesome school atmosphere.

Of the plan used in the Latimer Junior High School in Pittsburgh, Principal Graham makes the following statement:

¹ *Elementary School Journal*, vol. 15, p. 371.

One of the features of our school which we believe to be well worth while, is the organization this year of student government. Early in the term each report class elected a representative to the student organization, which in turn elected a president, vice-president, and secretary, and six additional members of a council of nine. This body is known as the "School Council," and with the guidance of the principal attempts to guide and in a measure control all student activities and foster a healthy school sentiment. The organization has met with a fair measure of success. It has done much to make the handling of the students easier during the lunch period and passing to and fro from classes, as well as keeping order during the chapel exercises; and in a few cases the Council has tried offenders against school society, and has then acted in an advisory capacity to the principal in inflicting punishment. On the whole the student organization seems to be quite successful in our junior high school.

At Richmond, Indiana, there is a representative committee of pupils forming a pupil council that acts with the principal in behalf of the entire student body; and all visitors to the Washington Junior High School at Rochester, New York, have been impressed by the provisions that the pupils have made both for their own conduct and for the comfort and convenience of others.

Of the schools reporting on the topic for this study, only one pretends to have a system of full self-government by the pupils, and 101 others profess to have partial self-government. There is no way of telling what this means. It is probable that not so many as one hundred have what would be recognized as self-government as the term is ordinarily used, for this requires unusual ability and constant hard work on the part of the teachers in charge; however, observation and inquiry lead one to assert with a high degree of confidence that responsibility is gradually extended to the

pupils in intermediate schools, according to their abilities to assume it, and that an effort is widely made to encourage initiation, social coöperation with others, and self-control.

Guidance. It is a commonplace to say that every pupil should have in school a gradually decreasing amount of control and guidance until he becomes at leaving time theoretically capable of self-direction. In the ordinary school a pupil notably bad, notably studious, notably clever at some specialty, notably rich or poor, notably handsome or ugly, is likely to receive fortuitous attention and incidental guidance; the demand is, however, that this aid be provided for every individual. Of course, because of home conditions, some pupils will need much more than others the help of teachers outside of their classes. The democratic school undertakes to equalize opportunities, and to achieve this end it must afford help according to the needs of pupils both inside and outside the regular curriculum.

The importance of guidance, both personal and educational, increases with the departmentalization of instruction. In order that the individual pupil may not be neglected by his several teachers, it has seemed not only wise, but actually imperative, that some adult be appointed his adviser. Superintendent Stout, of Topeka, Kansas, argues cogently that this adviser should not be a teacher of the pupil in any class, for the relation of teacher-pupil very frequently prevents the close confidences that otherwise may develop. Dr. Gosling, formerly of Cincinnati, and many others emphasize the importance of this friendly relation. Not all principals who accept the ideal have felt it necessary, however, to appoint an adviser who is not also a

teacher of the pupil. Principal Rorem,¹ of Sioux City, writes that he has

a home-room system whereby the teacher of each room of the first period in the morning holds the pupils responsible for conduct, attendance, study, and general attitude throughout the day and out of class. This teacher is expected to be the guide, adviser, and friend to whom the pupil may come at any time on any pretext or need. While the home-room is primarily a part of the disciplinary organization, it has become inspirational and directive. Welfare Period, thirty minutes in length, is conducted every Wednesday in the home-room. At this time the pupils are permitted to engage in any kind of activity, entertainment, or fun which meets the approval of the teacher. The games, jokes, debates, parties, funny stories, programs, current events, knitting, thrift campaigns, Red Cross work, parliamentary drills, elections, curio studies, and general good times have done much to bring about a comradeship between the teacher and pupils. The home-room teacher is the embodiment of the social, moral, civic, and educational guidance.

In practically every place where the advisory system is used, the teacher in charge of a pupil is expected to ascertain as much as possible about the home conditions, the life history, present state of health, and habits of play, work, and study of each pupil in his charge. In many places — for example, Holstein, Iowa; Los Angeles, California; and Renville, Minnesota — these data are kept on special cards which are transferred to other advisers with the pupil. Berkeley, California, endeavors to keep a pupil with the same adviser for a year and a half to two years. "Our teaching force is constant," writes the principal of the Luther Burbank School; "hence all old families are known and new ones are given particular attention by the adviser on their arrival in the neighborhood." At Gary, Indiana, an ad-

¹ *School Review*, vol. 27, p. 53.

viser is assigned to a particular section of the city, so that he may cumulate information about the living conditions, the environments, and any other phases of life that may affect the children. This plan is doubtless wise in a city of congested and shifting population, but it seems far better in other types of cities for an adviser to have a group homogeneous in respect to age and interests. Of course, whenever the duties of advising pupils are added to those of instruction, time should be provided in the schedule for them. Such provision is made in Los Angeles and other places.

An attempt was made to ascertain whom the schools use as advisers. Of the 232 junior high schools reporting, more than one third use the regular classroom (session room, registration) teacher. Nearly one fifth have some one not

TABLE XLVIII

SHOWING WHOM 232 JUNIOR HIGH SCHOOLS USE AS ADVISERS

Nobody.....	41
Parents.....	3
Superintendent.....	14
Special supervisors.....	3
Attendance worker.....	1
Registrar.....	1
All teachers.....	26
Former elementary-school teacher.....	2
Head of department.....	2
Class teacher.....	80
Language teacher.....	1
Physical instructor.....	1
Class adviser.....	49
Study-hall teacher.....	1
Sponsor.....	5
Teacher of vocational discovery.....	1
Vocational counselor.....	1
	<hr/>
	232

a teacher of the pupils; the others are widely scattered as will be seen in Table XLVIII, which shows whom 232 junior high schools use as advisers.

Educational guidance. Wherever opportunities for election of curricula or of courses are offered, there should be a concomitant preparation, for the whole system in secondary schools is based on the assumption of an intelligent and an informed electorate. Several inquiries have shown in pupils a profound ignorance concerning the contents and the possibilities of the curricula among which they are forced to elect. The Lincoln School of Los Angeles begins preparation for election before the pupils are transferred from the sixth grade. The principal, Miss Andrus, sends to the elementary schools, shortly before the period of transfer, teachers from her corps and representative pupils, who explain the curricula and the general plan of the intermediate school. The prospective graduates of the elementary schools are urged to spend a day at the Lincoln School getting acquainted with the general plan which is offered them. On the basis of such preparation the pupils make out a tentative program which is used for the first five weeks. During this time a study of the pupils' interests and aptitudes is made by the various teachers, and on the basis of the conclusions reached, modifications in the program are made.

Parents usually need information and guidance quite as truly as do their children. In some cities — for example Anderson, Indiana — the parents are invited to the junior high school before the opening of a term. There they have explained to them the curricula, and questions are invited. After they have sent in registration cards for their children

with data concerning life history, these are carefully studied together with the records that the pupils have made in the elementary grades; and in the light of the results, elections are approved or disapproved. In Hibbing, Minnesota, and in many other places, an attempt is made to formulate each pupil's program only after a conference between the parents, the pupil, and the principal.

Finally, pupils in junior high schools are occasionally, though much less often than the situation demands, advised systematically as to the electives open to them in the senior high school. In Kalamazoo, Principal Starkweather made provision to insure that each pupil be informed as to what he can study in the high school, and as to what such a curriculum will lead. Similar provision, as will be shown later, has been made in "life-career classes."

The tendency toward forming homogeneous groups of pupils according to their ability to learn is apparently strong. Schools for a long time have permitted certain elections or an additional subject in the program for pupils who had done unusually well in their previous year. At the Speyer School, New York City, an attempt has for several years been made to secure homogeneity in ability by means of standardized psychological and educational tests. Changes from group to group are permitted whenever the teachers agree that a pupil is better or poorer than some other one in another section. The teachers are encouraged to carry each group at its optimum pace, and for each pupil there is provided personal guidance by a teacher, supplemented by a system of oversight and aids from members of the "Leaders' Club." The result is that some pupils are able to ac-

complish three years' work in two; others make normal progress; and those not gifted intellectually are carried as fast as they can go, with such adaptation in subject-matter and in methods as they need. A similar plan of homogeneous grouping has been extended to include thousands of intermediate-school children throughout New York City. The homogeneous grouping of pupils is likely to be made easier by the tests recently standardized, especially those by the Council of National Defense.

Some cities have devised extensive record cards in an effort to ascertain the particular fitness of pupils. Vincennes, Indiana, for example, uses from the beginning of the elementary school a card on which each teacher enters her estimate of the pupil as to qualities like attentiveness or inattentiveness, boldness or bashfulness, enthusiasm or indifference, and as to whether he is a leader or follower, original or imitative, brilliant or a plodder, etc.; and at Mount Vernon, New York, Principal Palmer, of the Sophie J. Mee School, has devised a series of questions to guide in the approval of the pupil's election of any curriculum. The questions concerning the academic curriculum, for example, are: "Is the pupil a good scholar? Is he interested in books and work of a research nature? Is he persevering? Has he good power of concentration? Is he ambitious for some professional career? Is he scientifically inclined? Is there strong probability of his being able to continue long in school? to attend the high school? to attend college?" It is not known to what extent these devices are effective. They are likely, however, to call the attention of the adviser to traits which otherwise might be overlooked.

In Mankato, Minnesota, all the teachers of any pupil make monthly reports to his adviser as to his effort, progress, and conduct. This adviser confers directly with parents, taking to the principal only such cases as need his particular attention. Regular conference hours are provided every week in such schools as those at Radcliffe, Iowa, and the Bloom Junior High School, Cincinnati, periods in which pupils may consult with their advisers or with any teachers whom they wish to see about their work. Testimony is very general that pupils in junior high schools with advisory systems are looked after much more closely than they are in the ordinary high school.

Vocational guidance. It is a lamentable fact that a large percentage of boys and girls leave our schools either immediately at or shortly after the termination of the period of compulsory education. What these young people do, their successes and future careers, are becoming more and more recognized as the concern of the schools. It is generally recognized that pupils who leave school at the age of fourteen or fifteen seldom enter into an apprenticeship, but either go into some office or industry, expecting vaguely to "learn the business," or they secure positions of temporary character usually characterized as "blind-alley jobs."

It has been shown that the working child under sixteen is usually in a "blind-alley" occupation — often a mere errand boy — and finds himself several years later with no worthy calling and no preparation for any. Other disadvantages in children's work are the necessity for their hunting work (this is especially to be regretted in the case of young girls), the seasonal character of much of the work for the young, the difficulties due to inefficiency and misunderstandings, and the wandering from job to job in the vain hope that better conditions of employment will be found. En-

lightened employers as well as educational investigators seem to have arrived at the conclusion that neither industry nor commerce needs the services of children under sixteen, and that their place is in the school.¹

Lewis² showed that in two years after leaving school the average Iowa boy passes through three jobs:

The most common method followed by boys in learning a vocation is a trial and success method. They try this and that pursuit to see whether they are suited to it or it suited to them. But no elaborate system of vocational schools would entirely eliminate this method of learning vocations. It might succeed in reducing and eliminating some of the waste resulting from the present system.

How does the young boy or girl secure his position — with his eyes open as to the possibilities in and beyond the job? with the assistance and guidance of those who know more than he? or by his own undirected or fortuitously aided initiative?

. . . Usually in this country the burden of finding employment falls upon the individual. The cities and States of America do not have well-organized systems of employment bureaus for the purpose of adjusting either juvenile or adult laborer to employer. The boys as they leave school to go to work are for the most part thrown upon their own resources as is shown by the results of this investigation. More than 85 per cent of the jobs were found by the boys hawking for them. The remaining jobs were found in the following ways:

- 92 by answering an advertisement
- 57 through assistance of parents
- 55 through assistance of friends
- 1 through teacher in public school
- 1 by being asked by an employer.

¹ *Annals of the American Academy of Political and Social Science*, vol. 67, pp. 60-61.

² Lewis, Ervin E.: *Work, Wages, and Schooling of 800 Iowa Boys.*

Apparently the teacher does not attempt to assist these boys in securing work. Nor are their friends, relatives, and parents of very great assistance. The majority of the boys find work for themselves. It seemed not to be considered the business of any social agency other than the public school accurately to inform such boys concerning the occupations open to them. No literature is handed them concerning desirable vocations, and apparently no advice is offered them regarding unskilled, semi-skilled, or highly skilled employments. They are not told about the "blind-alley" jobs. No one looks after them systematically, following them from the door of the schoolroom into the jobs which necessity or choice causes them to accept. They find their own jobs and take the jobs that they can find quickly. These boys studied are therefore fair examples of what happens in the absence of vocational guidance. What might have happened if careful vocational guidance and supervision had been provided can only be inferred. It is safe to guess that the percentage of those entering and remaining in unskilled and low-grade skilled occupations would have been greatly decreased, and also that the "fetching and carrying" occupations — in which the chief duty is to wait upon the casual needs of others — would have been avoided to a much greater degree.¹

The school is being called on to afford, to the boy and girl approaching the end of their period of compulsory education, information that may result in their remaining longer in school, in their working more definitely toward some worthy position, and in preventing their entrance upon work that will leave them both intellectually and professionally on no higher level than the one on which they entered. It is often objected that the school cannot give infallible guidance toward a vocation, but it certainly should be able to compete successfully with the "suggestions of the street, . . . uncritical information about the successes of others, incidental suggestions of relatives or of child com-

¹ Lewis: *Loc. cit.*

panions, newspaper and magazine advertisements of doubtful veracity."

According to Brewer¹ vocational guidance has as its aim not only aid to the boy and girl in solving their own problems of immediate work, but also the larger end of spreading "knowledge of occupational problems throughout society in such a way as to help in solving fundamental social and civic questions."

Field² thinks that "it is not so important either that the child shall select at this early age the exact vocation which he will later follow, as it is for the child to have a vocational aim which will act as an educational incentive."

In the formulation of a plan for vocational guidance, it is imperative that certain mistakes be avoided. These are classified by Cohen³ as follows:

1. As to the ends sought, it must not be accepted that educational guidance is a panacea, destined to remove all social and moral ailments. We must proceed cautiously in evaluating the many schemes, sifting the extravagant claims of extremists, and rejecting much that is weak.

2. In our enthusiasm, let us not make educational guidance an end in itself. We should constantly bear in mind that it is merely a means for producing contented and efficient members of society by assisting and advising them in their selection of a career.

3. The discovery of aptitudes must always be a slow, natural process. It should not, with the best of intentions, be forced or hastened through "hot-house" methods. Short cuts have no place in this process.

4. The guidance by parents and teachers must be real assistance and direction. The temptation to use authority and influence

¹ *School and Society*, vol. 6, pp. 541-45.

² *Ibid.*, vol. 3, p. 871.

³ Cohen, I. David: *Vocational and Educational Guidance in the School*.

must be resisted lest the initiative of the pupil be deadened, and a choice be forced upon the pupil which will not be for his best interests.

5. Care should be exercised lest any plan for educational guidance degenerate into a system of caste education and develop the very objects that it aims to avoid. With this end in view, the vocational counselors should be experts not mere experimenters.

It is quite important, too, that the vocational adviser, besides giving information to the pupils regarding various types of work and their possibilities, endeavor to ascertain not merely what the pupil can do, but the *highest type* of activity in which he is likely to achieve success. Observation of several plans has seemed to show an apparent satisfaction with directing a pupil into what he is likely to do well, even though it is not the highest type of work of which he is capable.

The most frequent means of vocational guidance are "prevocational work," "life-career or occupations classes," or the "vocational counselor." The prevocational class usually combines a rotation of various industrial subjects in periods of six to twelve weeks, with a study of occupations and visiting of industrial plants. Perhaps the best known of these prevocational courses is the Ettinger plan¹ in New York City. This provides that in certain intermediate schools the boys of the seventh and eighth grades are given a combination of nine-week units in machine-work, sheet metal, wood-working, printing, electric wiring,

¹ Wade: "Experimenting with Prevocational Training in New York City," *Educational Administration and Supervision*, vol. 2, pp. 343-53.

Ettinger: *A Report on the Organization and Extension of Prevocational Training in Elementary Schools*. New York City Department of Education. 1915.

plumbing, drafting, garment-design, sign-painting, and bookbinding. The girls are given units in dressmaking, millinery, novelty-work, art-weaving, power machines, etc. In the Ettinger plan, as pupils manifest a marked power in a vocation and predilection for it, they enter special training without completing the cycle; if they show marked deficiency, they may be transferred to the academic course. In other cities — Passaic, for example — the pupils are compelled to take the entire cycle for "try-outs" because of the fact that many pupils are attracted to the first industry with which they have any experience without learning of the possibilities in others which may be better for them.

Unless these prevocational "try-outs" classes are supplemented by a study of the vocations and their possibilities and by visits to shops, they cannot reach their maximum effectiveness. It is quite true that such a plan will result in guiding children away from certain of the industries, — for example, the girls from power machine work; but for a child to know what he should for any reason avoid is quite as profitable, perhaps, as for him to know a trade for which he is fitted.

"Life-career or occupations classes" are found in a number of progressive junior high schools. That at Middletown, Connecticut, is perhaps the one best known and has been outlined in a widely used textbook.¹ Such a course has also been reported at Decatur, Illinois;² Butte, Montana; Chelsea, Massachusetts; Mohnton, Pennsylvania; and Lincoln, Nebraska.³ In other places — for example, Sacramento,

¹ Gowin and Wheatley: *Occupations*. Ginn & Co.

² *School and Home Education*, vol. 33, pp. 98-100.

³ *Educational Administration and Supervision*, vol. 3, p. 395.

California; and Dansville, and Cuba, New York — instruction is said to be given in this field.

The subject-matter to be contained in such a course is outlined by Brewer as follows: ¹

In every school there should be a general survey of the occupational opportunities which lie before children. It makes little difference how these occupations be classified, so long as a brief but definite examination be made of each of the main vocations with its characteristics, advantages, problems or disadvantages, remuneration, possible lines of promotion, desirable preparation, manner of entering, and service to the community. Another group of facts is concerned with the attitude of the worker toward all the occupations. For example, beginning with the educational guidance requisite for the child's successful school career, we may proceed to the consideration of the moral qualities needed for success, the problems of the young worker who enters employment unprepared, the opportunities for continuing one's education after beginning work, labor laws, methods of choosing an occupation, means of entering upon work, opportunities for securing advice, ways of studying the job and securing promotion, and the relation of one's occupation to the other duties and opportunities of life. Unless the child is to have an opportunity for a simple study of elementary economics and sociology in another class, the occupations class should take up the questions of causes of high and low wages, fluctuation in prices, purposes, kinds and incidence of taxation, proposed reforms in taxation, factors of production, wastes in unproductive labor, distribution of wealth, methods of and waste in the distribution of goods to consumers, land tenure, rent, the relation of government to the occupation, thrift, labor unions, etc.

Cohen and other writers urge the necessity of including in such a course elements of civics, ethics, economics, and social problems such as that of labor unions.

A course of occupations is frequently supplemented by a series of talks given by representatives of various professions

¹ *School and Society*, vol. 6, p. 542.

and industries. Such talks are reported from Silverton, Colorado; Renville, Minnesota; McVille, North Dakota; Ashland, Oregon; and New Cumberland, West Virginia. Unquestionably these may be made of much profit to children, though without close direction by the principal there is almost inevitably great waste in that the speakers do not fully comprehend the problem, or else they give an unbalanced conception of their own vocation. Furthermore, as Brewer warns, instead of facts the school may get "reminiscences, fatherly advice, big talk about successes, unsocial statements about competition, and various other objectionable matters." Some schools have followed the plan outlined by Davis¹ for the senior high school at Grand Rapids, Michigan. This plan provides for a study in the English class of abilities, interests, aptitudes, and possibilities in a number of vocations. It is said to have been used in the intermediate schools of Topeka, Kansas; North Easton, Massachusetts; and Butte, Montana.

Besides the books mentioned in the preceding paragraphs Cohen suggests the following for the use of pupils studying vocations:

1. Bloomfield, Meyer: *Readings in Vocational Guidance*.
2. Bloomfield, Meyer: *Vocational Guidance of Youth*.
3. Fowler: *Choosing an Occupation*.
4. Fowler: *Books on Occupations for Boys and Girls*.
5. Marden, Orison: *Choosing a Career*.
6. Parsons, Frank: *Choosing a Career*.
7. Puffer, Joseph: *Vocational Guidance*.
8. Weaver, Ely: *Profitable Occupations for Boys and Girls*.
9. Vocational Bureau of Boston: Pamphlets.

¹ Davis: *Vocational and Moral Guidance*. Ginn & Co.

The idea of the vocational counselor in the junior high school has been very popular because of the obvious possibilities. Objections have been made, however, that there are no teachers adequately trained for this work. It is in all probability true that few have adequate training, but there can scarcely be an intelligent adult interested in individual pupils who cannot acquire sufficient information about the vocations of a community to render valuable assistance. Brewer says that the school

organization should provide for individual conferences on vocational choices, and on such questions as further education, means of preparation for particular occupations, opportunities of earning money to allow the education to be continued, and preferences of parents. These conferences need be nothing more than friendly conversations, with information and advice suited to the needs of the individual. Each child may be asked to choose several occupations for special study, with tentative decision on one or two. No pupil should be asked to make his final choice of an occupation prematurely; many may profitably delay the choice until the college age. We may insist, however, that no one should be forced by economic necessity, or by the negligence of the schools, to enter a job or an occupation blindly.¹

The vocational counselor should have ample time provided for his work. It is necessary for him to spend a considerable amount of time visiting and studying local industries and the homes of pupils, and much at the school in personal conferences with individual pupils.

Mount Vernon, New York; Vincennes, Indiana; and other cities provide cards on which a cumulative record is made of particular qualities and activities that seem to reveal fitness or unfitness for certain vocations. Such cards have proved

¹ *Annals of the American Academy of Political and Social Science*, vol. 67, pp. 57-58.

of considerable value, though the counselor should be on his guard against the notion that persistence or similar qualities found in one field inevitably manifest themselves in all others. To quote Brewer once again:¹

It is now beginning to be seen that persons cannot be ticketed in this naïve manner — that the disorderly boy in one kind of activity is likely to become orderly in another, and that even a moral quality as honesty may, by the same person, be exhibited in one situation and be lacking in another. In other words, the theory of formal discipline or general training must not deceive the teachers; there are few if any mental qualities which, when present in one activity, may be credited to an individual as a general characteristic. A boy's perseverance in baseball does not guarantee his perseverance in arithmetic. Some teachers attach too great importance to mere physical characteristics, or to such vague and unmeasured hypotheses as "the influence of heredity," "innate qualities," "native ability," and others. All reliance on such data, together with phrenology, "character analysis," and study of physiognomies, had best be left to the charlatan. Life is too complex for such short cuts — scientific study of vocational-guidance problems is necessary, and there is no easy way.

The vocational-guidance record devised by Cohen and used at a New York City public school, is here given:

VOCATIONAL-GUIDANCE RECORD

1. Name of Pupil.....	2. Age.....	3. Grade.....
4. Residence.....	5. Parent's Name.....	
6. Parent's Occupation.....		
7. Parent's Plans for Pupil.....		
8. Pupil Excels in What Subjects.....		
9. Pupil Fails in What Subjects.....		
10. Pupil Shows Dislike in What Subjects.....		
11. Special Aptitudes Noted by the Teacher.....		
12. Teacher's Recommendations for Pupil's Future.....		

¹ *Loc. cit.*, pp. 62-63.

13. Pupil's Plans.....	
A. Continued Education.....	I. High School.....
	II. Vocational School.....
	III. Business Course.....
	IV. Other Plan.....
B. Work?.....	I. Nature.....
	II. Wages.....
	III. Knowledge of.....
	IV. Other Plan.....
C. Other Intentions?.....	
14. Counselor's Advice.....	.....

VOCATIONAL EXPERIENCE RECORD

A. Record in Educational Institutions.....	
I. Elementary.....	Effort..... Proficiency..... Deportment.....
II. High School: Year 1.....	Year 2..... Year 3..... Year 4.....
III. Other Institutions.....	
B. Positions Held.....	
<i>When: Where: Nature: Wages: Comment of Employer:</i>	
1.	
2.	

Some of the junior high schools have undertaken vocational guidance for pupils by means of placement in afternoons and Saturdays for part-time work, or in summers for full work, in order that children may not only be tried out themselves, but may explore a vocation in which they are interested. There is conflicting opinion as to the school's responsibility for the placement of its pupils when they leave for work. It is obvious, however, that some instrument of the State should be concerned with this phase of guidance.

Of the 293 junior high schools in the North Central Territory, 136, or 46.4 per cent, reported to Davis that they had some form of vocational guidance.

CHAPTER XI

BUILDINGS AND GROUNDS

THE adequacy of buildings and grounds for junior high schools must be considered in terms of educational purposes. Any school building requires provisions for proper light, heat, space, toilets, safety, and the like; but a junior high school congregating adolescents for an intermediate type of education needs to consider especially a location that will permit of assembling enough pupils to warrant the beginnings of differentiation, grounds ample for the desired program of physical training and for agriculture, gymnasiums, assembly halls and social rooms for a program of extra-curriculum activities, lunch-rooms if the length of day is extended, and laboratories and shops for exploratory or prevocational training.

Inasmuch as the site for a junior high school is frequently determined by the location of property already owned by the board of education or available for the money that can be expended, there are many compromises with the ideal. Superintendent Spaulding¹ proposed the reasonable standards shown in Table XLIX for pupils to travel to school. Inquiry was repeatedly made on visits to junior high schools regarding the maximum distance that pupils had to come, and very seldom was the standard of one mile exceeded. At Grand Junction, Colorado, and at several Indiana schools, wagons are used to transport pupils who live at a

¹ *A Million a Year.* Minneapolis, 1916.

TABLE XLIX

SHOWING PROPOSED STANDARD RADIUS IN MILES OF SCHOOL
TERRITORY

<i>Grades</i>	<i>Maximum</i>	<i>Desirable</i>
Kg.-VI.....	1 mile	$\frac{3}{4}$ mile
VII-IX.....	$1\frac{1}{2}$ miles	1 mile
X-XII.....	2 miles	$1\frac{1}{2}$ miles

distance; but junior high schools are essentially local institutions. When the maximum distance for pupils is more than one and one half miles, there is almost inevitably loss in holding-power. In Evansville, Indiana, according to Superintendent Benezet, when two eighth grades were opened to accommodate pupils living more than one and one half miles from the junior-senior high-school building, there was an immediate increase of one hundred in enrollment.

The Strayer standards give a perfect score for five to twelve acres of school grounds; other standards demand approximately one hundred square feet per pupil for play space. Of 112 junior high schools reporting on this item only twelve have more than five acres in their site; 44 have less than one acre. Several of the newly built city schools — in Houston, Trenton, and Boyle Heights, Los Angeles — have made ample provision for playing-fields and even for agricultural plots. The land values reported by 101 junior high schools range from \$100 to \$250,000, with a median of \$25,000.

Partly because of different ideals, but more because of local conditions, junior high schools are variously housed. Out of a total of 317 schools reporting on this item, 88 are in buildings of their own, some of these being old high-school buildings and others elementary-school buildings more or

less remodeled for the purpose. Abandoned high-school buildings, which have many features desirable for the intermediate school, have been utilized in Decatur, Illinois; Grand Rapids, Michigan; Fremont, Ohio; Allentown, Pennsylvania; Arlington, Massachusetts; and other places.

Ninety junior high schools are housed with the elementary grades, sometimes because of a belief that it is best to keep together all children until the period of considerable differentiation, sometimes because of economy, sometimes because of objections by parents to the removal of younger pupils to more remote buildings, and occasionally, as in Cincinnati, because of the ideal of making the junior high school a neighborhood center for all the people. Eighty-three junior high schools, usually in cities of 5000 to 50,000 population, are housed with the senior high school; among other cities having a six-year secondary school may be mentioned Detroit (four schools), Los Angeles (one school), and Belleville Township, Illinois. In McMinnville, Oregon; Anderson, Indiana; and perhaps other places the junior-high-school building is proximate to the senior high school, thus making possible many desired forms of coöperation. Fifty-three junior high schools, usually in rural communities or small towns, are housed with both the elementary and the higher secondary schools. In only an insignificant number of places is there a twelve-year unit because of a belief that all children in the public schools should be thrown together. Three junior high schools of those reporting are in buildings also used for the training of teachers.

It is interesting to contrast the percentages of the 314¹

¹ Deducting the three housed with teacher-training schools.

schools variously housed with those found by Douglass¹ from his questionnaire study of 169 schools, and by Davis² from his more complete returns from 272 schools in the North Central Association Territory. The fact that none of Douglass's or of Davis's schools reported being housed with all the other grades (this probably being due to the form of questionnaire used) of course makes the figures not strictly comparable.

TABLE L
SHOWING THE HOUSING OF JUNIOR HIGH SCHOOLS

Housed.....	U.S. (314)	Doug. (178)	No. Cent. (272)
separately.....	28.0%	26.6%	18.0%
with elementary school	28.7%	37.7%	31.2%
with senior high school	26.4%	36.1%	50.7%
with both elementary and senior high school	17.0%	?	?
	100.0%	100.0%	99.9%

Among other cities that have erected buildings specifically for junior high schools, and consequently containing interesting features, may be mentioned Houston, Texas; Kansas City, Kansas; Richmond, Virginia; Trenton, New Jersey; and Rochester, New York (the Jefferson School).

Of 235 junior high schools reporting on the item, half of them were erected before 1908, and 166, or 70.6 per cent, before 1914; these facts reveal the amount of adaptation. The median of original cost of 199 buildings was a little over

¹ Douglass: *The Junior High School*. Part III of the *Fifteenth Year-Book of the National Society for the Study of Education*. To make the numbers more nearly comparable, a few schools were omitted in obtaining these percentages.

² C. O. Davis: *Junior High Schools in the North Central Association Territory, 1917-1918*.

\$50,000; one fourth of the buildings cost less than \$35,000 and one fourth more than \$100,000.

Fifty-eight buildings occupied by junior high schools are reported as having been remodeled, but probably the fourteen that were remodeled before 1912 had no changes made in them especially for their present purpose. In one half the cases less than \$5000 was spent in alterations, which would imply that little adaptation to new needs was made. This implication is not generally sound, however, for in some of the small junior high schools of Vermont, for instance, very satisfactory improvements were secured by a minimum outlay of money, the boys doing much of the work of remodeling as a part of their training in manual arts.

More important than the cost of the building or the date of its erection is its adaptation to the work for which it is intended. Of 224 schools reporting on the item, 188, or 84 per cent, have libraries.¹ The number of volumes ranges from 50-100 to 6500-7000, the median number being 800-900. Several schools are near public libraries, in at least two of which regular classes are conducted in finding and effectively using books.

Assembly halls are in 198, or 85 per cent, of the 244 schools reporting, four of the schools having two such halls. In a number of the smaller schools assembly is held in one of the largest recitation-rooms; whether such rooms are listed as assembly halls is unknown. In the Boyle Heights (Los Angeles) School there are two small auditoriums, which are used for classes in public speaking, dramatics, and music.

¹ See Certain, C. C.: "A Standard High-School Library Organization for Accredited Secondary Schools of Different Sizes," *Educational Administration and Supervision*, vol. 3, pp. 317-38, especially pp. 332-33.

One or more gymnasiums are provided in 126, or 51.0 per cent, of the 247 schools reporting. It may safely be said that practically all of the large schools have provision for indoor physical training; there is also a strong tendency where new grounds are secured to provide more adequate out-of-door playing space. Sixteen schools report that they have swimming-pools.

The proportion of junior high schools having auditoriums and gymnasiums is gratifying, but its significance does not become really apparent until it is contrasted with the proportion of unreorganized schools having these special rooms. Combining our data with those presented in Bulletin 44 (1915) of the United States Bureau of Education, which reports conditions in 1334 towns or cities of 2500 to 30,000 population, we find the following:

TABLE LI

SHOWING PER CENTS OF SCHOOLS HAVING AUDITORIUMS AND
GYMNASIUMS

<i>Representative</i>	<i>Auditoriums</i>	<i>Gymnasiums</i>
Junior high schools.....	85.0	51.0
Grade buildings.....	23.0	7.4
High schools.....	67.0	35.0

Although the data for elementary and high schools are from no cities above 30,000, a comparison with those from representative high schools is on the whole fair. The conclusion is either that more progressive cities establish junior high schools or that junior high schools generally secure auditoriums and gymnasiums better than do other types.

One hundred and ten, or nearly half, of the 228 schools reporting, have special lunch-rooms. These range from simple

bare rooms with chairs or benches and tables to completely equipped cafeterias such as are found in the large modern high-school buildings. It is common testimony that if pupils must remain at the school through the noon hour the lunch-room is an economical investment. Moreover, it is frequently a profitable laboratory for the pupils taking household arts and accounting. Superintendent Wirt states that he finds girls of pre-adolescent period more willing to do various kinds of work in the lunch-rooms than they are when slightly older and more self-conscious.

Laboratories are reported in 185, or 79 per cent, of the 234 schools that answered the question. Of these 164 have one laboratory, fifteen have two, three have three, one has four, and two have five. It is probable that the majority of the schools not reporting on this topic have no laboratories.

Shops are reported of many kinds. Table LII shows the kinds of shops and the number of schools reporting each. Nothing else could so emphasize the experimental attitude of the junior high school regarding the kind of industrial work, prevocational exploration, or cultural hand-training, and the effort to adapt the industrial education to local needs, as the variety in kinds of shop.

There is reason to believe that these figures are far below the fact. There are listed, for example, only six schools with special rooms for stenography and typewriting, whereas there are actually several times that number in the sixty schools visited. Besides the two listed, at least Rochester, New York, also has a shop for automobile repairs. Similarly, only twenty-eight schools report print-shops, whereas Davis had returns from twenty-four schools offering printing in the

TABLE LII

<i>Shop or laboratory</i>	<i>Number of schools</i>	<i>Shop or laboratory</i>	<i>Number of schools</i>
Agriculture.....	86	Freehand drawing	4
Gardening.....	3	Painting.....	2
Woodworking.....	211	Plumbing.....	1
Manual training.....	1	Printing.....	28
Joinery.....	1	Cement work	2
Mill.....	1	Clay modeling	1
Pattern-making.....	3	Shoemaking	2
Turning.....	1	Tailoring.....	1
Jobbing.....	1	Barbering	1
Specialties.....	1	Stenography and typewriting.	6
Sheet-metal.....	37	Bookbinding	5
Machine-shop.....	9	Copper and jewelry.....	1
Gas-engine.....	2	Reedwork	1
Automobile repair.....	2	Laundry	1
Mechanical engineering...	1	Sewing	215
Electrical engineering.....	1	Millinery	1
Electricity.....	10	Design	1
Forging.....	10	Cooking	221
Mechanical drawing.....	5	Physiography	1
Drafting.....	1	Total.....	882

North Central Territory alone. The questionnaire was long and those making the returns probably tired of giving details.

Among the unusually interesting shops may be mentioned one at the Fourteenth Street Intermediate School in Los Angeles for the training of negro boys to be cooks in Pullman dining-cars; one for barbering at Xenia, Ohio; the two for automobile repairs at Oakland, California, and Grand Rapids, Michigan; and the specialty shop at New Britain, Connecticut.

Engelhardt¹ found the following interesting facts regarding the distribution of floor space in nine junior high schools:

¹ *A School-Building Program for Cities.* For definitions of the terms used, see page 76.

TABLE LIII

SHOWING BY PERCENTAGE THE DISTRIBUTION OF THE ENTIRE FLOOR SPACE OF NINE JUNIOR HIGH SCHOOLS

	<i>Median</i>	<i>25 Percentile</i>	<i>75 Percentile</i>
Administration	15.56 sq. ft.	11.62 sq. ft.	17.75 sq. ft.
Instruction	41.11	35.52	43.45
Social activities	15.84	12.82	18.80
General	20.56	17.03	21.06
Construction	8.21	6.96	9.59

The percentage of the entire floor space devoted to instructional and social activities combined was as shown in Table LIV.

TABLE LIV

SHOWING PERCENTAGE OF ENTIRE FLOOR SPACE OF NINE JUNIOR HIGH SCHOOLS DEVOTED TO INSTRUCTION AND SOCIAL ACTIVITIES

A	61.9	D	56.6	G	54.0
B	61.8	E	55.1	H	53.0
C	60.2	F	54.8	I	48.0

All facts show that in general no provisions for buildings have generally been made commensurate with the needs and ideals of the junior high school. The new institution has for the most part been housed in cast-off buildings or combined with the elementary- or high-school grades. These economies and makeshifts have been necessary to secure the organization at all. As it proves its worth and manifests its needs, adequate buildings are likely to be provided. A few cities, mentioned on page 273, have already erected buildings that are long steps in advance for the education of early adolescents; and several of the larger cities — for example, Philadelphia, Boston, Oakland and Buffalo — have entered on a program that will result in a number of special buildings for intermediate schools.

CHAPTER XII

COSTS

WHEN offered something new and attractive, our natural question is, "What will it cost?" We balance the advantages of the new against those of the old, consider the likelihood of realizing them in practice, estimate their relative values, review our assets, and make a decision. This process is precisely the one an administrator is impelled to follow when he hears the claims for the junior high school.

The question of cost is exceedingly complex. If we seek to ascertain what junior high schools have cost in various cities, we find few reports, and those computed by such different methods as seldom to be strictly comparable. And even if schoolmen were good accountants and reported outlays that could be fairly compared, it will be obvious from previous chapters that the amounts have been expended for schools very different in organization and aims, even though bearing the same name. Moreover, many items that should be considered cannot be readily evaluated in dollars and cents. How much, for example, is it worth to a community for a school to awaken in a boy an impelling ambition or to retain him for study a year longer than he would otherwise remain?

The problem of cost is too important, however, to be dismissed merely because it is difficult. In this chapter will be presented the facts, so far as they could be secured, of the absolute and relative monetary costs of junior high schools,

and later an analytic set of questions that must be answered before the problem can be fully solved.

The questionnaire used in this study asked for the per capita cost (total expenditure for instruction and maintenance divided by the average number of pupils attending) in grades 1 to 6, 1 to 8, 7 and 8, the junior high school, and the senior high school. Only a few of the reports gave costs for each group of grades, and not many more for enough of the groups to make the returns worth considering here. Only those data pertinent to our discussion are presented in the tables of this chapter. The returns are reproduced as received, except that costs given by the month were multiplied arbitrarily by nine, and that in two instances corrected data are supplied from official sources; there has been no further attempt to go behind the figures reported. One should keep in mind, however, that the schools differed greatly in organization, size, equipment, etc., as is obvious if one studies the details. The tables presented in this chapter show merely the amounts of money the cities report having expended for the different types of schools. Whether or not a high or a low expenditure is economical is entirely another question, to be answered by a consideration of the relative worth of what was secured in return.

Table LV presents the returns from all places that reported the per capita costs in both junior and senior high schools. When the costs for any of the other combinations of grades are given, they are included also. The average per capita cost for thirty-nine junior high schools reporting is \$53.72; the average cost of the thirty-five senior high schools is \$65.60. In other words, in these cities,

TABLE LV

SHOWING THE PER CAPITA COSTS OF THE SEVERAL SCHOOL DIVISIONS

<i>City</i>	<i>Grades I-VI</i>	<i>Grades I-VIII</i>	<i>Grades VII-VIII</i>	<i>Junior High School</i>	<i>Senior High School</i>
New Cumberland, W. Va.....	..	..	..	24.00	29.50
Radcliffe, Iowa.....	21.15	24.12	27.00	27.00	37.98
Johnstown, Penn.....	21.00	22.24	23.50	35.73	38.16
Chacotah, Okla.....	..	..	..	29.75	40.00
Mohnton, Penn.....	13.50	..	..	25.00	40.00
Saline, Mich.....	26.00	31.00	37.00	40.00	40.00
Richmond, Va., Bellevue.....	..	..	..	32.09	43.56
" " Binford.....	..	..	..	37.30	..
Hays, Kansas.....	24.75	26.55	28.35	28.35	44.01
Bowling Green, Ohio.....	18.14	..	..	48.51	45.23
Topeka, Kansas.....	..	32.40	..	26.01	45.36
Albany, Oregon.....	30.00	30.00	30.00	40.00	48.80
Muncie, Ind.....	..	..	..	50.40	50.40
Williamsport, Ind.....	18.45	..	..	33.75	50.50
Crawfordsville, Ind.....	24.93	24.93	24.93	24.93	51.30
New Britain, Conn.....	26.47	35.27	59.39	59.39	51.47
Dansville, N.Y.....	25.00	..	..	35.00	55.00
McMinnville, Oregon.....	..	..	..	45.00	55.00
Anderson, Ind.....	32.50	35.50	39.00	41.00	56.40
East Chicago, Ind.....	30.12	..	56.83	56.83	56.83
Mankato, Minn.....	..	..	..	40.00	60.00
Independence, Iowa.....	..	..	..	36.00	63.00
Muskogee, Okla.....	..	28.08	..	34.11	65.70
Granite District, Utah.....	36.00	38.00	45.00	50.00	70.00
Decatur, Ill.....	31.00	..	..	51.00	71.00
Hibbing, Minn.....	48.00	..	..	62.00	72.00
Essex Center, Vt.....	..	..	..	30.00	75.00
Kalamazoo, Mich.....	36.46	40.12	45.78	58.00	78.23
Trenton, N. J.....	..	33.38	..	74.25	85.68
Pomona, Cal.....	54.54	..	91.19	91.19	91.19
Berkeley, Cal.....	63.00	62.95	96.67	96.61	96.61
Grand Rapids, Mich.....	..	36.07	44.20	73.51	97.71
Oakland, Cal.....	..	..	62.52	90.00	100.92
Old Town, Me.....	..	..	..	76.50	103.92
Pasadena, Cal.....	..	64.65	75.00	75.00	140.36
Los Angeles, Cal., Sentous.....	56.03	63.08	..	91.00	145.08
" " " 14th Street.....	..	..	..	107.06	..
" " " Berendo....	..	..	..	105.33	..
" " " McKinley....	..	..	..	113.55	..

the junior high school costs on the average eighteen per cent less than the senior high school. In one place it costs only forty per cent as much; in five places it costs the same; and in two places actually more. High costs for either type of school usually are due to a large amount of industrial shop-work.

Table LVI presents the data from twenty-two cities that report the costs for the first six grades, the junior high school, and the senior high school. The average per capita cost in the elementary grades is \$31.38; the average for the junior high schools is \$50.04; and the average for the senior high schools is \$63.48. Roughly, the costs of the three types of schools in these twenty-two places are in the proportions of 5-9-10.

If we assume that the pupils in these twenty cities are distributed through the grades according to the estimate of the United States Commissioner of Education¹ for the country at large, and if we assume, further, that without junior high schools the per capita cost for the first six grades would remain the same through grades seven and eight, and that the per capita cost for the senior high schools would be the same with the ninth grade included, then we are able to compare the cost of systems with and without junior high schools. The conditions being granted, the cost to these twenty-two cities for a junior-high-school organization was three and one third per cent more than it would have been with an eight-year elementary school followed by a four-year high school. This estimate does not take into account any changes that may have been achieved in retention of pupils,

¹ *Report for 1917*, vol. II, p. 7.

TABLE LVI

SHOWING THE PER CAPITA COSTS OF SEVERAL SCHOOL DIVISIONS
IN THE SAME 22 CITIES

<i>City</i>	<i>Grades I-VI</i>	<i>Grades VII-VIII</i>	<i>Junior High School</i>	<i>Senior High School</i>
Radcliffe, Iowa.....	21.15	27.00	27.00	37.98
Johnstown, Penn.....	21.00	23.50	35.73	38.16
Mohnton, Penn.....	13.50	..	25.00	40.00
Saline, Mich.....	26.00	37.00	40.00	40.00
Hays, Kansas.....	24.75	28.35	28.35	44.01
Bowling Green, Ohio.....	18.14	..	48.51	45.23
Albany, Oregon.....	30.00	30.00	40.00	48.80
Williamsport, Ind.....	18.45	..	33.75	50.50
Crawfordsville, Ind.....	24.93	24.93	24.93	51.30
New Britain, Conn.....	26.47	59.39	59.39	51.47
Dansville, N.Y.....	25.00	..	35.00	55.00
Anderson, Ind.....	32.50	39.00	41.00	56.40
East Chicago, Ind.....	30.12	56.83	56.83	56.83
Granite District, Utah.....	36.00	45.00	50.00	70.00
Decatur, Ill.....	31.00	..	51.00	71.00
Lewiston, Idaho.....	31.00	..	51.00	71.00
Hibbing, Minn.....	48.00	..	62.00	72.00
Kalamazoo, Mich.....	34.46	45.78	58.00	78.23
Trenton, N.J.....	24.32	..	74.25	85.68
Pomona, Cal.....	54.54	91.19	91.19	91.19
Berkeley, Cal.....	63.00	96.67	96.61	96.61
Los Angeles, Cal., Sentous.....	56.03	..	91.00	..
" " " 14th Street ..	..	..	107.06	145.08
" " " Berendo....	..	..	109.79	..
" " " McKinley ..	..	..	113.55	..

saving of time, increased educational values, or any other matters.

Following is an estimate of the comparative costs in St. Louis:

The cost per pupil for instruction in the Ben Blewett Junior High School during the year 1917-18 was about \$75, as against \$40 for the elementary schools, and \$105 for the four-year high schools.

However, the comparative cost per pupil per year does not take into account several factors. The seventh- and eighth-grade costs in the regular elementary schools are higher than in the lower grades, so that the cost per pupil would probably be nearer \$50 than \$40. On the other hand, the high-school freshmen cost less per pupil year than the third- and fourth-year students; so that the cost of the ninth grades in the regular high schools is probably nearer \$90 than \$105. Assuming these estimates to be nearly correct, the junior-high-school pupils of the seventh and eighth grades, approximately two thirds of the total enrollment, should be checked up against the \$50 cost of the elementary schools, and the ninth grade, one third, against the high-school cost of \$90; thus: $2/3 \times 50 + 1/3 \times 90 = \63.33 per pupil in comparison to \$75 actual cost.

However, the pupils in junior high school make more rapid progress than in elementary school or high school. The cost per grade progress in 1917-18 was only \$57 in all three grades, making the saving on 1400 children, the average membership of the school, a saving of more than \$8000 annually to the community.

And yet the total money cost is not apparently less because the junior high school retains its pupils, and as long as they remain, the school does not save the money ordinarily saved by eliminating one third to two thirds of the pupils. The elimination owing to pupils going to work or remaining at home was less than 3 per cent during the year 1917-18. Indeed, the school is promoting to the tenth grade of the senior high school more pupils from its half of the old Soldan High School district than used to enter the tenth grade from the whole district, about 550 children a year.¹

Illustrating some of the difficulties of securing accurate and comparable statements of costs and of the variations even in the same city, the following comments on representative data are presented.

One city in the Far West furnished data from which Table LVII is made:

¹ Lyman: "The Ben Blewett Junior High School of St. Louis," *School Review*, vol. 28, p. 110.

TABLE LVII

SHOWING ENROLLMENT AND PER PUPIL COSTS IN ONE CITY

<i>Year</i>	<i>No. of pupils grades VII-XII</i>	<i>No. of teachers grades VII-XII</i>	<i>Total cost of salaries</i>	<i>Per capita cost of instruction grades VII-XII</i>	<i>Per capita cost of maintaining the whole system</i>
8-4 organization, 1913-14.....	327	17	\$13,900	\$42.51	\$44.44
Junior High Schools established —					
1914-15.....	422	18	15,575	36.91	39.78
1915-16.....	469	18	17,406	37.11	32.92
1916-17*.....	532	19	18,459	34.70	?

* First Semester only

On the face of the returns the junior high school has had a wonderful effect on the number of pupils above the elementary grades at a marked reduction in per capita cost. But are there other pertinent facts involved? Disregarding rather marked differences in figures furnished by the superintendent at different times, differences due probably to different methods of computing costs, we must note first of all that the gross expenditure for salaries in the six superior grades increased 24.7 per cent, with an average increase per teacher of 15.8 per cent. The decrease per capita cost must be due, then, to such an increase in the number of pupils as to permit of classes of larger size. (As the per capita costs for grades 7 to 12 and for grades 1 to 12 are derived by different methods, they cannot be compared.) The effect of educational changes in a school system is usually slow; the increase in the number of pupils here, after the establishment of the junior high school, is so sudden as to suggest

that other causes may have been at work. These were found to be a truancy law for the first time efficiently administered and a successful campaign for high-school pupils from adjacent districts without secondary schools of their own. That the registration continued to grow and the per capita cost to decrease in spite of an increased salary average is evidence that the maximum size of the classes possible with the building and equipment had not been reached; if the increase continues, the curve of per capita costs will, of course, not so steadily fall. These facts do not prove that the institution of a junior high school has been ineffective; a day spent in examining the organization and visiting the classes revealed merits which unaided should result in a larger and more healthful attendance. The facts do show, however, that conclusions should not be hastily drawn from data that do not present all of the material evidence in a situation.

A city in the South, which failed to report data on the questionnaire, has a per capita cost for its junior high schools considerably higher than that for its senior high school. Investigation showed that the senior high school was housed in an old building inadequate for even the traditional academic courses; it had no assembly hall, no gymnasium, and only makeshifts for laboratories; its grounds extended only a few yards to the street. The junior high schools, on the other hand, were in every sense modern. One of them, on a campus of seven and a half acres, has a building costing a quarter of a million dollars. It has an assembly hall with a moving-picture booth, an outdoor theater, a library, laboratories, shops, and a gymnasium with a swimming-pool.

"It costs more," said the superintendent, "not because it is a junior high school, but because it gives more."

For this report a comparative study of costs of the several types of schools in Grand Rapids, Michigan, was made by Professor C. O. Davis, the city being selected because it contains six-year elementary schools, eight-year elementary schools, a three-year junior high school established in 1912, a four-year high school, and two six-year high schools.

The cost for instruction in this study of the Grand Rapids schools is based on the enrollment and salary list (including teachers, regular and special, principals, and clerks), for the second semester 1916-17, while the cost for maintenance and equipment is based on the expenditures and enrollment for the year 1915-16. Maintenance includes the following items: janitors' salaries, upkeep of buildings, upkeep of grounds, fuel, water, light and power, furniture, general supplies, and janitors' supplies. The cost of equipment was found by computing the interest at five per cent of the valuation of the buildings, grounds, and equipment.

In figuring the per capita cost we did not take into consideration all the schools of the city, but tried to take schools which would be representative of the various social communities within the city. Madison, Buchanan, Turner, and Plainfield are schools which contain only the first six grades, and are situated in various sections of the city. Sigsbee, Hall, Palmer, and Lexington Schools contain the eight elementary grades, and are also situated in the various sections of the city. The Junior High School aims to contain only the seventh, eighth, and ninth grades, but at the present time it has also some pupils in the fifth, sixth, and tenth

grades. The Union School contains all the grades from the first to the twelfth, and is situated on the West Side, which is chiefly a manufacturing district. The South High contains the grades from the seventh to eleventh, inclusive; however, it is intended to add a twelfth grade next year. The Central High School is the old conventional type of high school, contains grades nine to twelve inclusive, and is situated in the best residential section of the city. The comparative costs are given in the following tables.

TABLE LVIII

SHOWING THE PER CAPITA COST PER ANNUM OF EDUCATION IN GRADES ONE TO SIX OF FOUR SCHOOLS IN GRAND RAPIDS

<i>Item</i>	<i>Madison School</i>	<i>Buchanan School</i>	<i>Turner School</i>	<i>Plainfield School</i>	<i>Average</i>
Instruction.....	\$28.21	\$24.72	\$25.53	\$23.06	\$25.38
Maintenance.....	7.42	7.50	6.95	6.96	7.21
Interest on equipment...	5.27	4.32	5.38	2.70	4.42
Totals.....	\$40.90	\$36.54	\$37.86	\$32.72	\$37.01

TABLE LIX

SHOWING THE PER CAPITA COST PER ANNUM OF EDUCATION IN THE SEVENTH GRADE OF SEVEN SCHOOLS IN GRAND RAPIDS

<i>Item</i>	<i>Sigsbee (a)</i>	<i>Hall (a)</i>	<i>Palmer (a)</i>	<i>Lexington (a)</i>	<i>Junior (b)</i>	<i>Union (c)</i>	<i>South (d)</i>
Instruction.....	\$33.96	\$34.72	\$27.20	\$40.44	\$55.62	\$49.14	\$88.00
Maintenance.....	11.03	8.69	7.28	13.86	12.41	6.52	21.29
Interest on equipment.....	9.38	4.48	5.35	10.41	8.78	9.46	25.73
Totals.....	\$54.37	\$47.89	\$39.83	\$64.71	\$76.81	\$65.12	\$135.02

(a) Schools operated on the 1-8 basis
 (b) School operated on the 7-9 basis

(c) School operated on the 1-12 basis
 (d) School operated on the 7-11 basis

TABLE LX

SHOWING THE PER CAPITA COST PER ANNUM OF EDUCATION IN THE EIGHTH GRADE OF SEVEN SCHOOLS IN GRAND RAPIDS

Item	Sigsbee (a)	Hall (a)	Palmer (a)	Lexington (a)	Junior (b)	Union (c)	South (d)
Instruction.....	\$41.49	\$40.95	\$28.09	\$39.06	\$46.81	\$34.91	\$54.37
Maintenance.....	11.03	8.69	7.28	13.86	12.41	6.52	21.29
Interest on equipment.....	9.38	4.48	5.35	10.41	8.78	9.46	25.73
Totals.....	\$61.90	\$54.12	\$40.72	\$63.33	\$68.00	\$50.89	\$101.39

(a) Schools operated on the 1-8 basis
 (b) School operated on the 7-9 basis

(c) School operated on the 1-12 basis
 (d) School operated on the 7-11 basis

TABLE LXI

SHOWING THE PER CAPITA COST PER ANNUM OF EDUCATION IN THE NINTH GRADE OF FOUR SCHOOLS IN GRAND RAPIDS

Item	Junior	Central	Union	South
Instruction.....	\$39.36	\$50.05	\$61.61	\$37.19
Maintenance.....	12.41	14.71	16.71	21.29
Interest on equipment....	8.78	19.01	9.46	25.73
Totals.....	\$60.55	\$83.77	\$87.78	\$84.21

TABLE LXII

SHOWING THE PER CAPITA COST PER ANNUM OF EDUCATION IN THE TENTH, ELEVENTH, AND TWELFTH GRADES OF THREE SCHOOLS IN GRAND RAPIDS

Item	Central	Union	South (a)
Instruction.....	\$70.88	\$62.28	\$52.73
Maintenance.....	14.71	16.71	21.29
Interest on equipment.....	19.01	9.46	25.73
Total.....	\$104.60	\$88.45	\$99.75

(a) Tenth and eleventh grades only accounted for in the South School

TABLE LXIII

COST OF CARRYING A PUPIL THROUGH THE SEVENTH AND EIGHTH
GRADES OF SEVEN SCHOOLS IN GRAND RAPIDS

Sigsbee.....	\$116.27	Junior.....	\$144.81
Hall.....	102.01	Union.....	116.01
Palmer.....	80.55	South.....	236.41
Lexington.....	128.04		

TABLE LXIV

COST OF CARRYING A PUPIL THROUGH THE SEVENTH, EIGHTH, AND
NINTH GRADES OF CERTAIN SCHOOLS OF GRAND RAPIDS

Junior High.....	\$205.36	Hall and Central.....	\$185.78
Union High.....	203.79	Lexington and Union..	215.82
South High.....	320.62	Palmer and Central....	164.32
Sigsbee and Central...	200.04		

The case of South High is hardly typical for the schools of Grand Rapids, inasmuch as building and equipment are new and expensive, and a large amount of equipment was purchased during 1915-16, which brings up per capita interest on equipment to nearly three times the average cost for the other schools. The per capita cost for instruction is also high at South High, largely because of the fact that high-salaried teachers are used in the grades more than in other schools, and spend more of their time in grade work than is warranted by the number of pupils enrolled in the grades, if the time is apportioned on the basis of number enrolled in each grade.

The figures for the seventh and eighth grades at South High are not accurate if the grades are considered separately, but are if the grades are considered together. This is due to the fact that during the second semester of the year

studied there was no seventh grade and part of the year's time which is charged to teachers of the seventh grade should be charged to the eighth grade.

These figures show that the Junior High is practically no more expensive than the other units of the Grand Rapids system. In the Junior High and South High the per capita cost is highest in the seventh grade and falls gradually lower through the eighth and ninth grades. Leaving South High out of consideration, the average per capita cost of carrying a pupil through the seventh, eighth, and ninth grades varies from \$164.32 (the lowest figure)¹ for the Palmer and Central High, and \$185.78 (the next lowest) for Hall and Central High, to \$215.82 for Lexington and Union. Junior High, Union, and the combination of Sigsbee and Central High differ by only about five dollars. In the seventh and eighth grades, however, the Junior High is the most expensive unit of the system, the exceptional South High being left out of consideration.

From the standpoint of cost of instruction alone, the cost of carrying a pupil through the seventh, eighth, and ninth grades shows a wider range among the various units of the system than it does when maintenance and interest on equipment are included, as is shown by Table LXV.

In Kalamazoo, Michigan,² the public schools are all arranged on the same plan. Beginning with the third grade

¹ The Junior-High-School per capita cost for instruction alone is 14 per cent higher than the average per capita cost of four elementary schools combined with the ninth grade of the high schools.

² This section of the report is drawn from two studies, one by a committee of Kalamazoo teachers, Principal J. A. Starkweather, chairman; the other, made for this report, by Professor C. O. Davis and a group of his graduate students.

TABLE LXV

COST FOR INSTRUCTION IN THE SEVENTH, EIGHTH, AND NINTH
GRADES IN CERTAIN SCHOOLS OF GRAND RAPIDS

Junior High.....	\$141.79	Hall and Central.....	\$125.72
Union High.....	145.66	Lexington and Union..	141.11
South High.....	179.56	Palmer and Central....	105.34
Sigsbee and Central...	125.50		

and extending through the sixth, there is in use what is called the "modified Gary system," under which the pupils are under the charge of the regular grade teacher for half of the time, and for the remainder of the school day they are under the direction of special teachers. Beginning with the seventh grade, all pupils are taught under the departmental plan.

There are three junior high schools in the city, as follows: East Avenue, Woodward Avenue, and Portage Street Schools. There are three other schools which have their seventh and eighth grades organized like the seventh and eighth grades in the junior high schools, namely, Frank Street, Lake Street, and Vine Street Schools. Pupils in the seventh and eighth grades in these three schools are allowed all the privileges of election of studies that are found in the regular junior high schools, and for their ninth-grade work, they transfer to one of the junior high schools, or to the ninth grade at Central High School. It is on the basis of the costs in these six schools that the study was made.

The system of junior high schools was established in Kalamazoo at the beginning of the school year 1914-15, though all the seventh and eighth grades had been conducted on the departmental plan for several years before

this time. According to Principal Starkweather, of the Woodward Avenue School, the junior high school has as its aim the providing by various means for individual differences among pupils, the providing of departmental teaching and exploratory courses, and the providing of special training for pupils who must leave before completing the senior-high-school course.

The figures are for the school year 1915-16, and the cost of instruction is based on the salary schedule of the junior-high-school teachers, making the proper division of time for all teachers who worked only part time in the schools in question. The maintenance cost per pupil was based on the following items: salaries of clerks and principals, janitors' salaries, supplies, reference books, fuel, apparatus, light and power, repair of buildings and grounds, repair of equipment and new equipment. The third item, interest on permanent investment, was added by the surveying committee, and was arrived at by computing the interest at five per cent on the valuation of the buildings and grounds, and dividing by the average number of pupils enrolled in each school. The comparative costs are presented in the following tables.

The high per capita costs in the East Avenue Junior High School are due to the fact that high-salaried teachers are found here in larger proportion than in the other schools. The total amounts paid for salaries each year in the three junior high schools are nearly equal, and East Avenue School has not so many teachers and only about half as many pupils as the other two schools. The lower cost of instruction in the Vine Street School is accounted for by the fact

TABLE LXVI

PER CAPITA ANNUAL COSTS FOR PUPILS ABOVE THE SIXTH GRADE
IN KALAMAZOO

	<i>Cost of instruction</i>	<i>Cost of maintenance</i>	<i>Cost of interest</i>	<i>Total cost</i>
Junior High Schools				
East Avenue.....	\$70.13	\$11.84	\$9.18	\$91.15
Woodward Avenue..	47.86	10.87	7.28	66.01
Portage Street.....	43.77	9.20	4.90	57.87
Elementary Schools				
Frank Street.....	47.55	8.55	2.61	58.71
Lake Street.....	42.09	6.62	4.79	53.50
Vine Street.....	28.80	10.60	4.85	44.25

TABLE LXVII

PER CAPITA ANNUAL COST OF INSTRUCTION IN WOODWARD AVENUE
SCHOOL OF KALAMAZOO IN ALL GRADES BELOW THE SEVENTH,
1915-16

Sixth Grade.....	\$ 9.93	Second Grade.....	\$13.12
Fifth Grade.....	11.36	First Grade.....	13.47
Fourth Grade.....	10.19	Kindergarten.....	1.35
Third.....	7.17		

TABLE LXVIII

PER CAPITA ANNUAL COST OF INSTRUCTION BY SUBJECT IN THE
WOODWARD AVENUE SCHOOL OF KALAMAZOO, 1915-16

Algebra.....	\$ 5.74	Arithmetic and spelling..	\$ 2.95
English and penmanship	4.33	Art.....	3.30
Latin and German.....	14.55	Cooking and sewing....	7.50
Geography.....	5.40	Manual training.....	7.73
Bookkeeping and business English.....	40.25	Literature.....	2.21
Science and physical geography.....	7.54	Music.....	.97
History and spelling....	3.98	Physical training.....	2.74

TABLE LXIX

PER CAPITA COST OF PUPILS IN KALAMAZOO SCHOOL SYSTEM FOR
1915-16, BASED ON INSTRUCTION, MAINTENANCE, AND OPERA-
TION

Grades I-IV.....	\$34.46
Grades V-VIII.....	45.78
Junior High School.....	58.00
Central High.....	78.23

that more pupils are enrolled per teacher, and as the building is near the Central High School, pupils in the grades who wish to take electives usually pass to the Central High School classes for this extra work. It is evident that the school with small classes has a very high cost per pupil for instruction and that the school with larger classes has a correspondingly lower cost. The cost of maintaining the schools per pupil is, of course, least in the building which has the greatest economy in heating space, provided that the building has also a full quota of pupils per room. Both these conditions are satisfied at the Lake Street School, which has large classes and a comparatively new heating equipment.

The Kalamazoo Committee made a careful study of the programs of the three junior high schools and of the enrollment in classes, and found that if all the pupils in certain elective subjects could be congregated at one central building, there would result a saving, in teachers' salaries alone, of \$7200, with an additional saving of \$1629 in maintenance. If this congregation were effected, the per capita cost of the junior high school would be reduced to \$49.28, an amount lower than the average per capita cost in the three elementary schools, with no impairment of the educational pro-

gram. In fact, it would offer still further opportunities for provision for individual differences.

In New York Dr. Bachman¹ showed that as then administered the three intermediate schools required fewer rooms by 8.7 per cent, fewer teachers by 5.36 per cent, and less equipment in the shops, kitchens, and gymnasiums by 19.11, 6.31, and 18.17 per cent, respectively. (Figures could be taken from the data of three elementary schools used, however, to show that they are more crowded than the intermediate schools and therefore cheaper.) He concludes:

In view of these differences in requirements and hence differences in cost, if 20,000 seventh- and eighth-grade pupils could be brought into intermediate schools, the immediate saving would at the very least be sufficient to provide for the erection of a school building of thirty-nine rooms, and for the annual total cost of operating such a school.

Assistant Superintendent Wheeler, of Philadelphia,² states that the instruction of ninth-grade pupils can be carried on with entire satisfaction in the new type of elementary buildings in that city, which cost \$270 per pupil, whereas they are housed in high-school buildings costing \$570 per pupil. As approximately 40 per cent of the Philadelphia high-school enrollment is in the ninth grade, he argues that the establishment of junior high schools would not only bring secondary education much nearer the homes of a larger proportion of the pupils, but would also result in a considerable saving to the city. Superintendent Spaulding³ gives the per pupil cost in Minneapolis as \$235 for elementary schools (grades 1 to 6), \$300 for junior high schools,

¹ *Report on Intermediate Schools*, Committee on School Inquiry, 1914.

² *Old Penn Weekly*, vol. 13, p. 1007.

³ *A Million a Year*.

and \$390 for senior high schools. These costs are for buildings fully equipped. Superintendent Chandler, of Richmond, Virginia,¹ gives the per pupil cost for the elementary school as \$73.81 and for the junior high school as \$101.19. These costs are for building and heating plant alone.

Superintendent Thompson, of Boston,² argues that junior high schools will reduce costs. He writes that in Boston

the cost of elementary education per capita is \$45, and of the high school, \$85. About 40 per cent of the high-school population is found in the first year. By the adoption of the intermediate-school plan (6-3-3), 40 per cent of the expensive high-school education could be brought to a per capita basis of something like \$50 or \$55. . . . The intermediate school would save the present high school the embarrassment of receiving large masses of pupils who are destined to drop out either in the first or second year. It is or has been assumed that the greatest loss takes place at fourteen, or at the end of the elementary-school period, but in the city in question, pupils drop out in equal numbers at the ages of 14, $14\frac{1}{2}$, 15, $15\frac{1}{2}$, and 16. At 16 the elimination movement is greatest.

In Oakland, California, where there is one intermediate or junior high school, a vocational intermediate school, and a number of departmentalized grammar schools offering some secondary work, Superintendent Barker reports the cost from ten to one hundred per cent increased over that for the ordinary elementary school work.

There is no general agreement as to the proper ratio of per capita expenditure for secondary and for elementary schools. That it varies tremendously may be seen from Table LV and from an examination of surveys and superintendents' reports. Cook found, in his General Survey of Public

¹ *Annual Report* for 1915.

² *Educational Administration and Supervision*, vol. 1, p. 457.

High-School Education in Colorado (1914), that as the size of the high school increases in that State the ratio decreases. The following table is drawn from his study:

TABLE LXX

**CENTRAL TENDENCIES OF RATIO OF COSTS OF THE HIGH SCHOOL
TO THE COST OF THE GRADES**

<i>Schools with average attendance of</i>	<i>Median ratio of cost per pupil</i>
Fewer than 25.....	2.58
25-50.....	2.30
50-100.....	1.94
100.....	1.72

It should be obvious that in education as in other work we get only what we pay for. If the junior-high-school program brings educational opportunities that are not offered in the grades as now organized, it will in all probability require the expenditure of more money. Almost the only saving possible, if educational details are unchanged, is that resulting from the congregation of enough pupils to permit of a division into full-sized classes. But there are many possible returns from improved conditions which, if secured, will make for the greatest economy. Among these may be mentioned retention of pupils, provisions for individual differences, increased interest, social direction, and the like.

The following list of questions is presented to suggest the items that must be considered in preparing a budget for a reorganized system of schools. Many of the questions cannot be answered definitely in terms of money; but the entire list will enable one to make a general balance sheet which should clarify thinking as to what schools cost or should cost and as to the true meaning of economy:

A. *Grounds, Buildings, and Equipment*

1. How will the site compare with that of other buildings, elementary and secondary, in per pupil cost and in location, size, and satisfaction?
2. Will there be an increase or a decrease in the gross amount of carfare, whether paid by the public or by the pupils? Will it make unnecessary an expense, of money or of time, in going to "centers" for manual training, etc.?
3. How will the building compare with those now housing the pupils of the selected grades? Will it have more special rooms than elementary-school buildings and fewer than the high school? What will be the per capita cost of each building? and what the relative monetary worth of the advantages offered?
4. How much cheaper will one central building be than several smaller ones providing for the needs of intermediate-school pupils?
5. Will it afford an opportunity to use an old high-school building, with a small outlay for remodeling?
6. How will the equipment compare with that in other buildings now caring for similar pupils?
7. Will the junior high school affect the kind and amount of supplies?
8. To what extent will the congregation and segregation of pupils of similar age and aims result in a more constant and full use of building and equipment, and hence of a reduction of overhead expenses?
9. To what extent will the congregation in a junior high school release for use by other pupils space which must otherwise be provided?
10. How much per pupil is saved on janitor service, heat, and light by the congregation of pupils? How much is lost by the proposed increase in the length of the school day?
11. To what extent can the building be constructed so as to be used also for continuation and evening schools?

B. *Teachers*

1. What effect will the sex and quality of teachers selected have on the salaries paid?

2. What effect on salaries will there be because of an increased length of school day and of supervision of extra-curricula activities?
3. To what extent will it reduce the cost of supervision by having in one building enough teachers to make it unnecessary for a supervisor to travel from school to school during recitation time?

C. Curricula and Courses of Study

1. What is the monetary worth of the facilities afforded by the new type of school in the making of new courses of study?
2. What is the monetary worth of the more accurate classification of pupils by means of exploratory courses for differentiated work in higher schools or in vocations?
3. What is the monetary worth of the kind of education — academic, industrial, and social — provided in the junior high school and more especially of its effects on society?

D. Classes

1. To what extent will the junior high school by congregation and division decrease the number of classes of uneconomical size?
2. To what extent because of differentiated curricula will it increase the number of small classes?
3. To what extent will it afford classes of a size to be adequately taught with a maximum of contagious enthusiasm?
4. To what extent will it release room which would need to be otherwise provided in elementary schools?

E. Pupils

1. Will the junior high school cause pupils to remain longer in school, thus
 - (a) increasing the outlay for education?
 - (b) increasing the value of the pupil to society?
2. Will it as a result of interest and exploratory courses decrease the number of pupils who enter the high school and then drop out? (Provision must be made in preparing a budget for the maximum number of pupils expected at any one time.)

3. Will it, by providing homogeneous groups moving at rates suited to their ability, insure a reduction of time for some pupils and a more assured steady progress for others?
4. Will it by presenting better work of more obvious worth reduce the number of repeaters because of failure?

F. Effects on Pupils and Teachers

1. What is the monetary value of the effect of the junior high school on the interests and ambitions of pupils and of teachers?
2. What is the effect, direct and indirect, of the junior high school on public interest and therefore on public support?

Only after considering all of these questions, and perhaps others raised by local conditions, can one be ready to cast up accounts and decide with accuracy whether or not he should organize a junior high school. There are many answers that must be contingent on the conception that one has of the function of the junior high school — for example, what sort of building is required to house it? There are other questions the answers to which can only be guessed at — questions concerning the effect of the new type of school on acceleration. And, finally, there are a number of questions which, even if they could be definitely answered, would need to have their answers transmuted into terms of monetary value before we could use them exactly in solving the problem of cost. Such a question is that concerning the effect on the interests of pupils.

But perhaps an enumeration of the cost factors involved will make a consideration of the problem more likely to be complete and a decision therefore more convincing. It is hoped that this discussion will so warn schoolmen that they may be prepared to controvert the arguments of any who in

the discussion of an educational problem see only the amount of the financial outlay. For such people the easiest way to save money is to eliminate pupils.

The conclusion, as usual, is that whatever is bought must be paid for. Here and there in matters of organization there may be some saving of money by means of the junior high school; but if the education of pupils of this intermediate period is to be materially improved, we must materially increase our school budgets. And the public when increasing the budget should demand that the proposed program for reform be sound and complete, and reasonably assuring of success under local conditions.

CHAPTER XIII

RESULTS

WHAT are the results of the organization of junior high schools? This natural question, which is often propounded, is for several reasons difficult to answer satisfactorily. In the first place, the oldest of the new type of schools have been in existence less than a decade, a space of time too brief for the accomplishment of many of the possible results; and it is seldom if ever that the internal reorganization is completely made at the beginning. In the second place, results that are found in one school may not with confidence be expected in others inasmuch as the name "junior high school" is applied to institutions of widely varying characteristics. In the third place, there are in reorganized schools many important factors that are not always taken into account — factors like the personality of the principal and teachers, the geographical location of the school, the nature of the educational needs of the community, the rate of growth of the city, enforcement of the compulsory education laws, and the like. And finally, some results are too intangible to be measured by the available technique. But despite these difficulties, there is some evidence that is of sufficient value to be considered.

Enrollment, attendance, and retention. Of 214 junior high schools reporting, all but two state that reorganization has increased the number of pupils in the grades concerned. One hundred and sixty, or 74.8 per cent, believe

that it has improved the regularity of pupils' attendance.

From data in the annual report of the Commissioner of Education for 1917 and in Ayres' *Child Accounting in the Public Schools* (1915) the distribution of pupils by grades in the United States and in Cleveland has been computed as in Table LXXI. It must be noted that these figures do not take into account the normal increase in school population. By these percentages one may judge somewhat of the success of any school system in holding its pupils.¹

TABLE LXXI
SHOWING THE DISTRIBUTION BY PERCENTAGES OF PUPILS IN THE
UNITED STATES (1917) AND IN CLEVELAND (1915)

Grade	United States	Cleveland
1	21.6	11.8
2	13.7	11.8
3	12.8	11.8
4	12.3	11.8
5	10.4	11.7
6	8.5	11.0
7	7.0	9.4
8	5.9	7.4
I	3.1	4.8
II	2.0	3.4
III	1.4	2.4
IV	1.1	2.2
	<hr/> 99.8	<hr/> 99.5

Of 238 junior high schools reporting on the matter of retention, all but two state that reorganization has resulted in an increased persistence of pupils. In the North Central

¹ The percentages as given for the United States are affected by the fact that in seven Southern States there are only seven grades in the elementary schools.

Territory, however, Davis found only 44.7 per cent of principals who believe that the junior high school improves retention.

A number of schoolmen supplemented their answers to the questionnaire by statements and figures. Superintendent Huff, of Holstein, Iowa, wrote:

More rural students are entering, and practically all students remain in school beyond the eighth grade, while before the junior high school was established at least fifty per cent dropped out there.

Superintendent Harris, of Ellenville, New York, wrote:

I am sure that our work as now carried on is more interesting to the pupils and that therefore we are holding our pupils longer. The following facts seem to support this belief: Last year we registered 30 per cent more resident seventh- and eighth-grade pupils than we registered during the last year of our old system, and this in spite of the fact that the number of pupils of school age had *decreased* slightly more than ten per cent. . . . During the last two years that we had the grade system we lost exactly $66\frac{2}{3}$ per cent more seventh- and eighth-grade pupils, in proportion to the number that we had, through the issuing of work certificates, than we have lost in the same way since the junior high school was established.

Principal MacCurdy, of Tulsa, Oklahoma, wrote:

This year is the first time we have been able to enroll and retain 100 per cent of the pupils graduating from the elementary grades.

These statements are representative of many that were received.

Two additional encouraging facts were several times volunteered: first, that the reorganization frequently draws back into school pupils who had dropped out; and, second, that the holding power of the schools is increased,

especially for boys. The average percentage of boys in the seventh, eighth, and ninth grades at Grand Rapids for the four years preceding and for the five years following the establishment of the junior high school is shown in Table LXXII:

TABLE LXXII

SHOWING THE PERCENTAGE OF BOYS IN SEVERAL GRADES AT GRAND RAPIDS BEFORE AND AFTER THE JUNIOR HIGH SCHOOL WAS ORGANIZED

Grade.	Before	After
7	46.7	48.6
8	46.4	46.8
9	48.9	51.1

Statistical data concerning the retention of pupils have been reported by a number of schools. Superintendent Foster, of Dansville, New York, wrote that, after the establishment of his junior high school

the elimination from the seventh and eighth years decreased 20 per cent, and the enrollment increased 19 per cent. For the four years before the parochial-school pupils came for junior-high-school work¹ the average number entering from those schools was twelve. For the past two years it is 17, an increase of 41 per cent. The average number entering the senior high school for the past two years is 47 per cent greater than that entering during the preceding four years.

Parks² reports the percentages of elimination at Cuba, New York, for three years before and for two years after the establishment of the junior high school. The data are shown in Table LXXIII:

¹ See page 108-9.

² *Educational Administration and Supervision*, vol. 2, p. 458.

TABLE LXXIII

SHOWING PERCENTAGES OF ELIMINATION AT CUBA, NEW YORK,
BEFORE AND AFTER ESTABLISHMENT OF A JUNIOR HIGH SCHOOL
IN 1913-14

<i>Year</i>	<i>Grade VII</i>	<i>Grade VIII</i>
1911	7.1	45.8
1912	17.3	46.1
1913	10.0	47.4
1914	4.8	5.5
1915	0.0	25.0

At Topeka, Kansas, the percentage of the high seventh-grade pupils in the Sumner and Quincy Schools that reached the low ninth grade before the reorganization of these schools was 32.3; the percentage afterward was 59.5.¹

Johnstown, Pennsylvania, reported that during the two years before the establishment of the junior high school 70.7 and 71 per cent of the eighth-grade graduates entered the ninth grade, and that the next year 83 per cent entered. Superintendent Weet² reported that at Rochester the percentage of retention from the eighth grade to the ninth increased from 51 per cent to 94.5. And in Public School 159, New York City, "about three times as many girls cover the ninth grade of work as under the old plan which transferred them at the end of the eighth grade to high school."

Stetson, in his "Statistical Study of the Junior High School from the Point of View of Enrollment,"³ reported the data in Table LXXIV, which show a marked increase

¹ *Superintendent's Report, 1915-16.*

² *Educational Administration and Supervision*, vol. 2, pp. 435-46.

³ *School Review*, vol. 26, pp. 233-45.

in the percentage of pupils retained for the ninth grade after the junior high school was established in 1911-12. The 103 percentage of retention in 1915-16 is explained by the application of a compulsory-education law to compel pupils completing parochial schools to attend the ninth grade.

TABLE LXXIV

SHOWING THE ENROLLMENT OF THE EIGHTH AND NINTH GRADES
IN GRAND RAPIDS, 1907-16

<i>Year</i>	<i>Eighth Grade</i>	<i>Year</i>	<i>Ninth Grade</i>	<i>Percentage retained in Ninth Grade</i>
1907-8	946	1908-9	635	67.1
1908-9	1,039	1909-10	626	60.2
1909-10	1,035	1910-11	693	65.0
1910-11	992	1911-12	713	72.8
1911-12	1,072	1912-13	804	75.0
1912-13	990	1913-14	829	83.7
1913-14	1,140	1914-15	984	86.3
1914-15	1,097	1915-16	1,135	103.0
1915-16	1,296	1916-17	No record	

This table shows conclusively [Stetson states] that previous to the intermediate type of organization the percentage of students who remained in the ninth grade was steadily on the decline [?] and that a smaller percentage was held over. It also shows that as soon as the junior high schools were organized the percentage in the ninth grade increased steadily.

A study made for this report by Professor C. O. Davis confirms the fact that in Grand Rapids the junior high school holds pupils well from the eighth grade to the ninth; for

the one promotion period considered (February, 1916) the junior-high-school record is slightly better than that for six elementary schools and not quite so good as that for the South High School (grades VII-XII) or that for the Union School (grades I-XI). The data are shown in Table LXXV.

TABLE LXXV

SHOWING THE PERCENTAGE OF EIGHTH-GRADE GRADUATES FROM
SEVERAL GRAND RAPIDS SCHOOLS ENTERING HIGHER SCHOOLS,
FEBRUARY, 1916

Six elementary schools.....	83.5
Junior High School.....	85.6
South High School (VII-XII).....	96.1
Union School (I-XI).....	87.0

The fact that the junior high school draws from one district of more or less similar economic and social conditions, while the elementary schools are in various parts of the city, serves to render inaccurate absolute conclusions from these data.

In Los Angeles the Intermediate School Principals Association prepared the data in Table LXXVI, a part of which has been published elsewhere. This table shows that during four full years only 6.5 and 5.2 per cent of elimination may justly be charged against the intermediate schools at the end of the eighth and the ninth grade respectively.

In 1917 a study ¹ was made by Briggs of 402 pupils who had graduated from the Los Angeles intermediate schools in 1913 and 1914, and of 413 pupils, similar ² in economic status, who had completed the elementary schools in 1912 and 1913, these pupils being traced as far as possible by

¹ *Journal of Educational Research*, November, 1920.

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TABLE LXXVI
CONCERNING PUPILS COMPLETING THE EIGHTH AND NINTH GRADES IN LOS ANGELES CITY INTERMEDIATE SCHOOLS, 1914-17

	Feb. '14	June '14	Feb. '15	June '15	Feb. '16	June '16	Feb. '17	June '17	Total	%
A8 Grade										
Number of graduates.....	667	883	835	924	766	997	764	1019	6855	100.
Returned to same school.....	525	665	709	673	671	782	682	749	5456	79.6
Transferred to intermediate schools.....	29	14	8	12	10	11	4	19	107	1.6
Transferred to city high schools.....	52	69	30	64	14	55	18	64	366	5.3
Entered private schools.....	10	14	5	12	3	4	4	15	67	1.
Left the city.....	15	57	20	51	20	47	18	57	285	4.2
Out on account of sickness, travel, etc.....	9	13	22	23	10	22	7	20	126	1.8
Working.....	27	51	41	89	38	76	31	95	448	6.5
A9 Grade										
Number of graduates.....	355	479	525	558	430	644	462	660	4113	100.
Transferred to city high schools.....	307	435	480	484	399	586	436	560	3687	89.6
Entered private schools.....	7	6	2	15	8	13	3	12	66	1.6
Left the city.....	8	7	8	16	6	5	3	24	77	1.9
Out on account of sickness, travel, etc.....	9	8	12	8	10	10	9	4	70	1.7
Working.....	24	23	23	35	7	30	11	60	213	5.2
Average high-school credit.....	9.5	10.7	10.7	11.53	11.61	11.16	11.85	11.8	11.18	

their records until they had left school. The study showed that of the pupils completing the eighth grade 65.9 per cent of the elementary-school group entered the high schools and 87.2 per cent of the intermediate-school group remained for the ninth grade. In the tenth grade were found 55.8 and 65.5 per cents, respectively. One reason why these percentages are considerably lower than those in Table LXXVI is the fact that they include only the pupils who were found to be actually in attendance in Los Angeles schools.

In the study just cited it is shown that after pupils reach the tenth grade, whether they were prepared in elementary schools or in junior high schools, they persist in practically the same percentages through the higher grades to graduation.

Academic success. The academic success of pupils cannot be accurately known by a study of the marks assigned by teachers; but the testimony of 193 out of 195 principals that the per cent of promotion has been increased since re-organization is at least indicative of an adjustment of the junior high school to its pupils.

Lacking satisfactory data from the application of standardized tests, we may measure the academic success of junior high schools by the relative per cent of pupils passing uniform examinations and by their comparative records in advanced classes of the secondary school. Superintendent Foster, of Danville, New York, writes:

That the junior high school has not interfered with the work in the three R's is shown by the fact that the percentage of students who have passed the Regents' preliminary examinations in the past two years is larger than during the preceding three years. The work done in the first year senior high school is of a higher

character than it was before the inauguration of our junior high school department.

It must be obvious, however, that academic success depends on many factors besides the organization of an independent intermediate school; consequently we may expect wide variation in results.

The reports are not always favorable. In New York City, where ninth grades were added to a number of elementary schools without any material change in the equipment or teaching force, uniform examinations were given in June, 1917, to the pupils in from two to seven intermediate schools and to check groups in senior high schools. The results, as shown in Table LXXVII, are very unsatisfactory.

TABLE LXXVII

SHOWING THE PERCENTAGE OF INTERMEDIATE AND SENIOR HIGH SCHOOL PUPILS IN NEW YORK PASSING IN CERTAIN SUBJECT EXAMINATIONS

	INTERMEDIATE SCHOOLS			SENIOR HIGH SCHOOLS		
	Number of schools	Number of pupils	Per cent passing	Number of schools	Number of pupils	Per cent passing
Algebra.....	7	325	31.0	9	6333	69.5
Commercial						
Arithmetic...	5	296	34.5	1	155	54.8
Latin.....	5	172	45.9	1	276	63.6
French.....	2	52	57.6	1	219	94.9
Spanish.....	4	226	18.5	1	296	60.8
German.....	3	115	60.8	1	186	56.5

It seems to me [writes Associate Superintendent John L. Tildsley¹] that this failure to do good work is due in large part to the

¹ *Report of Superintendent of Schools of New York, N.Y., 1917.*

attempt to conduct the intermediate schools as a money-saving scheme, and to the fact that teachers are doing this work who are not equipped for it, and to the further fact that the work has not been supervised by the principals and heads of departments with the thoroughness and ability with which this supervision is done in the high schools.

Success in advanced grades, like that in uniform examinations, is dependent on more factors than the organization of junior high schools. Reorganization may be followed by an increased percentage of pupils passing their high-school subjects, or an improvement in the marks assigned, as at Cuba, New York,¹ where the average mark in the ninth grade rose from 73.2 to 84.8; or, as will be shown, it may be followed by equally unsatisfactory conditions. In each instance cause and effect must be found before the junior high school can justly receive credit or discredit.

Studying the records of 404 high-school pupils at Grand Rapids, one half of them prepared in the junior high school and the other half in the grammar grades, Stetson² found that the difference in the form of organization seems to have had very little influence on the advanced scholastic work in English or in mathematics. He agrees with the Grand Rapids School Survey that the reorganization of secondary education, especially as concerns the curriculum and its administration, has not been carried far enough.

Studying the records of 271 graduates in 1916 of the Central High School of Grand Rapids, 105 of them prepared by the junior high school and the remainder by the conventional elementary grades, Davis found similar re-

¹ *Educational Administration and Supervision*, vol. 2, p. 458.

² *School Review*, vol. 25, pp. 617-36.

sults. Except in the case of English, where the advantage is with the conventional schools, there is no marked difference between pupils attributable to their preparation. It seems clear that the type of school by which the pupils of Grand Rapids are prepared for higher secondary education is a relatively unimportant factor so far as their later academic records are concerned.

In the study at Los Angeles, to which reference has been made,¹ it was found that in the opinion of the high-school teachers the intermediate-school pupils who continued their electives were not adequately prepared. A number of them were after trial put back into lower classes, and only 22 per cent of the remainder received marks as high as in their preparatory schools. Probably no satisfactory articulation of work between schools is possible unless there are either very detailed syllabi or else objective standards for the measurement of results.

The extent to which pupils continue in the high schools the subjects elected in intermediate schools was also studied at Los Angeles. The results, which are presented in Table LXXVIII, are far from satisfactory. Only 39.2 per cent of the intermediate-school electives were continued in high schools; and of the number continued 62.3 per cent, or 24.4 per cent of the original number, were continued successfully, either in classes of advanced or of the same grade. The percentages on the basis of the entire number who took electives in grades VII-IX, including those who did not enter high schools, would of course be much smaller. In so far as it is advantageous for pupils to learn early that they have little

¹ Page 309.

TABLE LXXVIII

SHOWING THE EXTENT TO WHICH INTERMEDIATE-SCHOOL ELECTIVES
WERE CONTINUED IN LOS ANGELES HIGH SCHOOLS

Subjects	Number of pupils electing subjects in intermediate schools	Per cent of pupils electing the same subjects in high schools	Number of electives in same subjects by the pupils in high schools, but not in intermediate schools
Latin.....	34	35	12
German.....	28	25	11
French.....	19	67	5
Spanish.....	95	44	9
Bookkeeping.....	47	28	5
Stenography.....	58	38	6
Totals.....	281	39	48

or no fitness or need for certain subjects, this record may be encouraging; but certainly it does not manifest that the intermediate schools of Los Angeles are effective in forwarding pupils in subjects of secondary-school rank.

An even less satisfactory showing of results is presented in Tables LXXIX-LXXXI, which are drawn from an unpublished study made in Los Angeles by Principal Robert A. Thompson, of the Sentous Intermediate School. Table LXXIX shows a surprisingly large amount of elimination and retardation in the elected subjects during the junior-high-school course. No subject holds as many as half of its pupils to normal progress for three years. But the seriousness of the condition becomes more apparent from Table LXXX. This shows that of the pupils who were traced to the high schools (35.6 per cent of the original number) only 30 to 45 per cent in the six subjects had made normal progress.

TABLE LXXIX

SHOWING THE PERCENTAGES OF INTERMEDIATE-SCHOOL PUPILS
IN LOS ANGELES CARRYING ELECTIVE SUBJECTS SUCCESSFULLY

(1) <i>Number of pupils in Low VII, March, 1914</i>	(2) <i>Per cent of (1) completing High IX with the normal 2 units of credit, with mark of A or B, which is required for full promotion</i>	(3) <i>Per cent of (1) carrying subject through High IX, but receiving mark below A or B</i>	(4) <i>Total of (2) and (3)</i>
French.....	116	18.1	20.7
German.....	165	17.0	26.7
Latin.....	105	18.1	31.4
Spanish.....	596	10.6	16.4
Stenography.....	223	8.6	18.0
Bookkeeping.....	198	10.1	21.2

Of these normal pupils, from 27.8 to 63.6 successfully passed the first year of continued work in the high school. But of the entire number promoted to high school only from 10 to 27 per cent passed in the Low XI grade classes, where the pupils were normally expected to be. From 20 to 33.3 per cent of all transferred pupils passed in the subjects in some lower class, in which they were placed because of low marks in the intermediate schools or because of unsatisfactory work in Low XI. From 0 to 22.9 of the pupils failed in high-school classes, and from 30.8 to 63.3 per cent dropped the subjects. The full failure in articulation between the lower and upper schools is not realized, however, until Table LXXXI is studied. This shows that in the fourth year after beginning the elected secondary-school subjects

TABLE LXXX

SHOWING THE SUCCESS OF INTERMEDIATE-SCHOOL PUPILS IN LOS ANGELES WITH ELECTIVE SUBJECTS CONTINUED IN HIGH SCHOOLS

	No. pupils in High IX who entered high school (1)	Per cent of (1) with 2 units of credit and A (2) or B mark	Per cent of (2) success- ful in Low XI (3)	Per cent of pupils in (1) successful in Low XI (4)	Per cent of pupils suc- cessful in classes lower than Low XI (5)	Per cent of pupils in (1) failed (6)	Per cent of pupils in (1) dropping subject (7)
French.....	26	42.3	63.6	27.0	27.0	15.4	30.8
German.....	40	45.0	27.8	12.5	30.0	5.0	52.5
Latin.....	35	40.0	35.7	14.3	20.0	22.9	42.9
Spanish.....	92	42.4	43.6	18.5	25.0	14.1	42.4
Stenography.	30	40.0	33.3	13.3	33.3	0.0	53.3
Bookkeeping.	30	30.0	33.3	10.0	23.3	3.3	63.3

TABLE LXXXI

SHOWING THE PER CENTS OF INTERMEDIATE SCHOOL PUPILS IN LOS ANGELES CONTINUING ELECTIVE SUBJECTS SUCCESSFULLY FOR FOUR YEARS

	Pupils in Low VII	Per cent of (1) successful in Low XI, nor- mal progress, in fourth year from beginning subject	Per cent of (1) successful in classes below Low XI, in fourth year from beginning subject	Total per cent of pupils suc- cessful in any class in fourth year from be- ginning subject
French.....	116	6.0	6.0	12.0
German.....	165	3.0	7.3	10.3
Latin.....	105	4.8	6.7	11.5
Spanish.....	596	2.8	3.8	6.6
Stenography..	223	1.8	4.5	6.3
Bookkeeping.	198	1.5	3.5	5.0

only from 1.5 to 6 per cent of the pupils were continuing with normal progress, and from 3.5 to 7.3 per cent of them, though retarded, were continuing these subjects in the high schools three and a half years later.

On these data Principal Thompson comments as follows:

Spanish begins with an enrollment of 596 and just three and a half years later has only seventeen of these pupils left in the classes where they would be expected. The record of other subjects in the list is scarcely better. It is easy to say that there are others besides the seventeen . . . who are doing successful work. It is easy to say that many have moved from the city and have thus depleted the classes. It is easy to say that all of those 596 who took work even for one term, or for one month, obtained some educational value from the experience. But no matter what we say, the cold fact remains, and the figures are too appalling to be explained away. All of these conditions enumerated to explain the figures do exist, and are very real, and will continue to be very real. Can we then afford to go ahead term after term carrying large beginning classes through weeks of expensive instruction in the seventh grade, and carrying very small ninth grade classes that are still more expensive in order to get these few boys and girls ready to fit into a Low XI class in high school? Are there not other subjects that will be far more valuable for all seventh grade pupils than those we are offering?

These tables raise a number of grave questions which must be considered by all administrators who are reorganizing curricula for junior high schools. When only from 6.6 to 12 per cent of pupils who elect a foreign language are successfully carrying the subject in any class four years later, the conclusion seems inevitable that in the beginning there should be offered exploratory and revealing courses composed largely of material justifiable to the extent taken.¹ Many of the pupils eliminated from the courses

¹ See pages 165-174.

as offered doubtless had small aptitudes for the subjects elected in the intermediate school, and thus the high schools were relieved of the obligation to offer them more expensive instruction in these subjects later.

The implied criticism is less of the intermediate schools than of the type of elementary work generally offered. The condition would seem relatively less bad if we knew the per cent of Los Angeles high-school pupils who continued their electives in foreign languages for four full years. Although this is not known, we may consider for the sake of comparison the fact that in the Central High School at Grand Rapids the per cent of pupils taking Latin and German for the fourth year, successfully or unsuccessfully, was only 15.6. The per cent of pupils continuing these languages one, two, and three years was 18.3, 52.3, and 13.8 respectively. It was also found at Grand Rapids that a much larger percentage of pupils who begin their electives in the eighth grade continue them for three years than do those pupils who begin them in the ninth grade.

Interest. Whatever the statistical results of the achievement of the pioneer junior high schools, which we must recognize have not fully realized the possibilities through reorganization, the principals believe that there have been an increase of interest on the part of pupils, an improved school spirit, and better community support. In the questionnaire returns 220 record their belief in an increase of pupil interest; 234, with two dissenting opinions, in an improvement in school spirit; and 172, with one dissent, in better community support. Davis found that from 78.2 to 79.9 per cent of the principals in the North Central

Territory believe that the junior high schools have pleased the parents, teachers, and administrators; and that from 61.4 to 69.6 per cent believe that they furnish better social and moral conditions and turn out pupils better socially equipped.

From many letters volunteered by principals at Auburn, Maine; Berkeley and Los Angeles, California; Chelsea, Massachusetts; Clinton, Iowa; Dansville and Ellenville, New York; Hot Springs, Arkansas; Norfolk, Nebraska; Richmond and Tippecanoe County, Indiana; and other places, there is room to quote only the following:

Our work as now carried on is more interesting to the pupils, and therefore we are holding them in school longer. My belief that the work is more interesting is supported by the statement of the pupils. In answer to the question whether they prefer the new plan and why, 90 per cent expressed a preference for the junior high school, 40 per cent giving as their reason the advantages of promotion by subject. Two other reasons which stood out were the opportunities for election of subjects and the fact that the work is more pleasant when there is a change of teachers from period to period. Not one of us, faculty or board of education, would consider for a moment going back to the old plan. (Ellenville.)

The change to the junior high plan has had a wonderful effect. The introduction of new subjects and a revision of the content of the old with a modification in methods of teaching have greatly stimulated the children's interest in school work. There has been greater harmony between pupils and teachers, and a more friendly spirit has been clearly evident. Both have been happy in their work and much pleased with the new arrangement. The discipline has been easier, and undesirable tension has been approaching the minimum rapidly. The pupils go about their work in a much more business-like way and are more thoughtful and dependable. They have learned to make a better use of their study periods, and the lessons are better prepared. With this has come an increased power of initiative. The first of the year it seemed

best to allow them more liberty of action in passing to classes and to the basement, in order that they might have a greater chance to learn self-control through practice. The result has been gratifying. The junior high school has put into the ninth year an enthusiasm that seemed to be lacking in former years when pupils had practically to repeat work they had already been over. I have taken pains to question both my corps of teachers and the pupils concerning this new arrangement and I find the answers practically unanimous in its favor. No teacher wishes to go back into regular grade work, and the pupils express themselves as much pleased at the change. (Chelsea.)

In conclusion, it must be repeated that the facts and opinions cited are to be considered chiefly for the schools furnishing them; other conditions doubtless would furnish different results. But in so far as these data are representative, they show that junior high schools do tend to increase the enrollment of pupils of early adolescence, especially of boys, to retain them longer in school, to bridge the gap between the elementary grades and the high school, to furnish better provisions for pupils of varying abilities and needs, and to increase the interest, school spirit, and community support. On the other hand, the data show that much yet remains to be done in the rewriting of courses of study and in the improvement of instruction, particularly in academic subjects to be continued in high schools. The junior high school must still be considered an opportunity rather than an achievement.

CHAPTER XIV

IN CONCLUSION

THE arguments for a reorganization of secondary education so as to provide some form of junior high school are now generally accepted as sound. The broad discussion and debate at teachers' meetings and in educational magazines a few years ago have given place, as a survey of programs and tables of contents shows, to questions concerning the means of securing the best reorganization of the school system both as a whole and in its details.

As has been shown, the progress of the junior-high-school movement has been astonishingly rapid. Recommended by several educational commissions during two or three decades, it began to receive lay endorsement in 1909 and 1910 with the vote of the Minnesota Federation of Labor and the Minneapolis Commercial Club, and since then it has been approved by an impressive number of educational theorists, administrators, commissions, societies, and associations. Of 105 reports of school surveys, 33 recommend the establishment of junior high schools in the locality or State covered by the survey; two express approval of some plan already in operation and similar to the junior high school; one is uncertain as to the need in the community studied, and one (Louisville, Kentucky) finds, in the face of strong advocacy by several clubs, that local conditions do not demand junior high schools. Sixty-eight of the surveys make no mention of reorganization.

The movement has had a wide range geographically and in the types of communities forwarding it. Practically all of our largest cities have established one or more junior high schools to test the claims made by theorists, to give principals and teachers an opportunity to work out a program suitable to local needs, and to accustom the public to the new type of institution before proposing a city-wide reorganization. Every report is to the effect that the success achieved warrants an increase in the number of junior high schools.

But the movement has not been confined to the cities. Some States, as Vermont and New Hampshire, early proceeded to a wide reorganization, especially of their rural and small urban schools, and others, as Ohio, Minnesota, and Indiana, have encouraged reorganization by issuing bulletins of suggestions for either six-three-three or six-six grade systems.

Arguments for the junior high school concerning the psychological, sociological, educational, and vocational advantages are to a considerable extent as applicable to the small community as to the urban; and although the rural or semi-rural school seldom contains pupils enough to make any extensive amount of differentiation possible, reorganization affords other advantages. In the first place, it simplifies the elementary-school problem by reducing to six the number of grades to be taught in the one-teacher school, and in somewhat larger communities by separating the younger and the older children to the advantage of both groups. Discipline is likely to be easier, and for the older pupils it will be possible "to lengthen class recitations and accord-

ingly help the teacher to provide more and better instruction."¹

Beyond this it is often possible for a small community that cannot afford a full high school to extend its work somewhat, organizing the grades beyond the sixth as a junior high school and thus making some secondary education accessible to a larger number of pupils than under the old plan. Some communities have found it advisable to substitute for an inadequate four-year high school an intermediate school of such length that it could be satisfactorily conducted by the number of teachers and with the equipment available.

The program for the small junior high school in Vermont, New Hampshire, Maine, and some other States is based partly on the supposed inability of a community to support a school of more than eight grades, and partly on a belief that the organization of a new type of school will facilitate change in courses of study, adapting the subject-matter better to the local needs. Rural education is only a phase of education in general; consequently farm-life experience must serve as an approach and as a medium of interpretation rather than as a goal of fixed choice. Doubtless if the subject-matter of rural schools is materially modified, other States will find, as Vermont has done, that education of convincing worth will open unsuspected financial resources which will gradually extend the number of grades often through the eleventh or twelfth. This facilitation of educational change, especially for the seventh and eighth grades,

¹ Foght, in *Report of the United States Commissioner of Education, 1916-18.*

is the chief reason for the six-six organization in rural or semi-rural communities.

If a community cannot support a school of twelve grades, the democratic alternative is that its pupils who are ready for advanced work shall have it made possible by an appropriation from the public treasury. When it is realized that over 700 per cent more urban than rural pupils graduate from high schools, it is clear that accessibility of education is a prime factor in its continuance. The rural junior high school brings some secondary education, and that of a better type, to two thirds the population that now have poor advantages or none; consequently it is reasonable to expect a steady extension of this type of school in many of our States.

The reorganization of small schools encourages rural and village coöperation, facilitating consolidation and setting up the school as the community social center. The possibilities in this field, as manifested especially in Vermont, Baltimore County, Maryland, and Minnesota, are limitless.

Inquiry was made as to the obstacles to full and successful reorganization that were found in practice by junior high schools. Of those reported all were the result of tradition or of laws determined by conditions before the new type of schools became an important part of our educational system. Of 170 schools answering the question concerning obstacles, twenty-five report none. Of the remaining 145, forty say that "lack of the right kind of teachers" was the greatest impediment. No information was secured from the teachers as to the adequacy of superintendents and principals. Other obstacles most frequently mentioned were the loca-

tion of the school and the lack of suitable textbooks and equipment.

Laws in some States define elementary and secondary schools in such ways as to make reorganization difficult. In some instances they also prescribe curricula, courses of study, and textbooks, require uniform state-wide examinations, demand reports, license teachers, and distribute funds on the eight-four basis. In 1920, however, according to letters from state departments of education and so far as could be ascertained from their reports, there is in thirty States no legal obstacle to the establishment and successful administration of junior high schools. In ten of the remaining eighteen States there are obstacles in the prescribed courses of study; in four, of textbooks; in eight, of uniform examinations; and in four, of the distribution of funds. But among the States that have statutory obstacles there are only three in which the junior-high-school movement has not already made considerable progress; the provisions of old laws are, for the sake of educational progress, ignored, usually with the approval of the state department of education.

One federal law, the Smith-Hughes Act to promote vocational education, was framed entirely for the old type of organization; and although it is often desirable for certain boys and girls to receive in the seventh and eighth grades some vocational training, junior high schools cannot furnish it with the subvention of the National Government, nor can they receive financial aid for normal pupils in the ninth grade without sacrificing much of the educational program which has come to be considered fundamental for most early adolescents.

The junior high school is accepted in theory, and its possibilities have proved so alluring that the movement for reorganization is well under way in both urban and rural districts. The physical redistribution of the grades seems assured; but if, having accomplished that, schoolmen rest content, they will have missed the one great educational opportunity of their generation for real educational reform. There is a demand for purposes so clear and so cogent that they will result in new curricula, new courses of study, new methods of teaching, and new social relationships — in short, in a new spirit which will make the intermediate years not only worth while in themselves, but also an intelligent inspiration for every child to continue as long as profitable the education for which he is by inheritance best fitted. In its essence the junior high school is a device of democracy whereby nurture may coöperate with nature to secure the best results possible for each individual adolescent as well as for society at large.

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Brief report. Points out that the Committee of Ten as early as 1893 recognized the need of a change from the eight-four system; gives a synopsis of the report of committee on six-year courses of high-school study; endeavors to show what should be expected of pupils at the end of the sixth school year; and suggests a rather narrow list of studies for pupils of seventh and eighth grades.

— NATIONAL COUNCIL OF EDUCATION. Junior High Schools. In its Report of the Committee on Economy of Time in Education, pp. 25-27. Washington, Government Printing Office, 1913. (United States Bureau of Education, Bulletin no. 38. 1913.)

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— The Minimum Essentials *versus* the Differentiated Course of Study. In *Proceedings, National Education Association*, 1916,

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— The Six-Year Course of Study. In *Principles of Secondary Education*, ed. by Paul Monroe. New York, The Macmillan Company, 1914, pp. 226-29.

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Pros and cons for the junior high school from the standpoint of psychological conditions and social needs.

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— The Training of Teachers for Intermediate Schools. *Educational Administration and Supervision*, 2: 448-55, July, 1916.

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A statistical study of two groups (comprising 404) of students graduating in 1916 from the Grand Rapids high school. One group had had the privileges of the junior high school, the other had not. Yet a comparison of their respective abilities in English and Mathematics shows the differences to be negligible. Since this new type of organization is being maintained at a greatly increased cost, Stetson naturally raises the question as to its real value. He attributes this parallelism of achievement in the two groups to the fact that the curriculum in Grand Rapids had remained practically the same, and justifies the added expense of the junior high school on the basis of the intangible results which it makes possible.

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— The Junior High School. *Vocational Education*, 3: 30-39, September, 1913.

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